



University
of Glasgow

<https://theses.gla.ac.uk/>

Theses Digitisation:

<https://www.gla.ac.uk/myglasgow/research/enlighten/theses/digitisation/>

This is a digitised version of the original print thesis.

Copyright and moral rights for this work are retained by the author

A copy can be downloaded for personal non-commercial research or study, without prior permission or charge

This work cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given

Enlighten: Theses

<https://theses.gla.ac.uk/>
research-enlighten@glasgow.ac.uk

Capital Accumulation and Food Crisis in Algeria: the Contradictions
of a Capitalist Development

by

Noureddine Chouakria

A thesis submitted in fulfilment of the requirements for the
Degree of Doctor of Philosophy
Department of Political Economy
University of Glasgow
December 1988

© Noureddine Chouakria 1988

ProQuest Number: 10970846

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 10970846

Published by ProQuest LLC (2018). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code
Microform Edition © ProQuest LLC.

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

Acknowledgements

This thesis has been prepared in extremely difficult conditions. To begin with, there were the impediments to carrying out proper field work. In retrospect, these appear the least difficult. Several factors, though exogenous to our immediate academic concern, considerably affected normal working conditions. The bureaucratic interruption of my grant on two occasions, the curtailing of my granted period study by several months, and an arbitrary measure taken by my University of origin, upheld over six months, which denied me a legally entitled sabbatical of one year, and so on, are a few of the problems that cost me well over a year of uninterrupted study.

However, this thesis would very probably not have reached its final stage without all those from whom I found both moral and material support. I owe a great debt to my supervisor Professor Radha P. Sinha who not only helped with all the means at his disposal, but also put up with views and ideas he did not always share.

My special thanks and appreciation are particularly addressed to Mr Philip J. O'Brien of the Institute of Latin American Studies for the warm and rich comments he made on an earlier draft of this thesis.

I should also like to acknowledge the support of the University of Glasgow and to the Office for International Programmes. In particular my personal thanks go to Professor A. Skinner and Professor D. Vines of the Department of Political Economy. I should also like to acknowledge my gratitude to Professor I.B. Thomson, Mr. J.A. Alexander and Miss A. MacGregor for taking part in resolving some of the difficulties I faced.

To the generous friend that he has always been and the proofreader he had to be, all my thanks go to Dr. R. Cox.

An invaluable debt is owed to my wife Rachida for her unfailing moral support through all the difficulties of the period of my research. Last but not least this work is dedicated to my two daughters Mouna and Manel who have seen so little of their father during these past years.

Contents

Acknowledgements.....	ii
Contents.....	iii
List of tables	
Within the text.....	ix
Within the Appendix.....	xiii
List of figures	
Within the text.....	xv
Within the Appendix	xv
List of maps	363
Abbreviations.....	xvii
Glossary	xx
Abstract	xxi

INTRODUCTION	1
---------------------------	----------

Part I: Colonisation and the development of agriculture

INTRODUCTION	18
I.A brief preliminary historical background: Pre-colonial Algeria	19
II.The decomposition of the traditional society and the emergence of the	23
colonial economy	
A. The direct mechanisms of land expropriation	24
B.The economic mechanisms of expropriation	29
III.The development of colonial agrarian capitalism	36
A. The wine-growing agriculture	36
B. The colonial cereal agriculture	38
C. The consolidated land structure of the colonial agriculture	40
a. The land structure	40
b. The mode of farming in the European sector	44
IV. The "traditional" agricultural sector	46
A. The agricultural structure of the indigenous sector	49
B. The mode of farming in the indigenous sector	50
C. Agricultural credit and capital accumulation	52
V. The crisis of colonial development: the end of the colonial order	55
CONCLUSION: the colonial legacy	60
NOTES	66

PART II: The post-colonial industrial policy of development: oil rent and capital accumulation.

INTRODUCTION	80
I.The pre-conditions of realisation of the state policy of accumulation	81
A. The transitional period of reforms: 1962-1967	81
a. The administrative reforms	82
b. The policy of nationalisations	82
c. The creation of state enterprises	83
d. The financial measures	83
B. The source of capital accumulation: oil rent	83
a. Oil and capital: a theoretical assessment	84
b. The mode of determination of oil prices of production	86
c. Surplus profit and oil rent	89
II.The mode of consumption of oil rent: the Algerian policy of development	92
A. The theoretical formulation of the type of accumulation promoted	92
a. The industrial option of the "ASD" : the model of	93
industrialising industries	
b. The I.S model and the I.I model	95
B. The embodiment of the Algerian strategy of development	97
a. The development plans: an overall view	98
b. Investment allocation and the centres of capital accumulation	99
c. The distribution of industrial investment	100
1. The role of capital accumulation in the export sector	101
2. The role of capital accumulation in the domestic sector	104
C. The conditions of realisation of the "ASD"	107
a.The external conditions of realisation of the mode of capital	108
accumulation	
1. The financial conditions of accumulation	108
2. The cost of external financing	111
b.The internal conditions of realisation of capital accumulation	114
1. Unemployment and mode of accumulation	114
1.1. the sectoral distribution of employment	115
1.2. Employment creation and labour market	118
1.3. Capital accumulation and income distribution	120
2. The State and capital accumulation	121
CONCLUSION	126
NOTES	129

Part III. The unfolding of the agrarian question

Introduction to Part III	143
---------------------------------------	------------

Chapter I. The agricultural self-managed sector

INTRODUCTION	149
I. The internal structure of the self-managed sector	152
II. The ONRA policy of management of the self-managed sector	153
A. The marketing policy on ONRA	154
B. The credit policy	156
C. Farm machinery and the conditions of reproduction of fixed capital	157
III. The economic reforms of the self-managed sector	158
A. The internal restructuring of the estates	158
B. The reforms of the supporting structures	160
a. The organisation of farm credit	160
b. The marketing reorganisation	160
IV. The side effects of state intervention in agriculture	164
A. The land factor of the self-managed sector	165
B. The policy of land regrouping	166
C. The farm machinery situation of the self-managed sector	169
D. The fertilizer situation of the self-managed sector	171
E. The management of the labour force of the self-managed sector	173
a. Overall trend	173
b. Determinants of the labour situation	175
F. The performance of the estates: some indicators	179
CONCLUSION	184
NOTES	187

Chapter II. The private agricultural sector

INTRODUCTION	193
A. The land base of the private agricultural sector	194
B. The farm structure of the private agricultural sector	198
a. The subsistence and the small farm units (the family sector)	198
b. The average farms	202
c. The big farms	204
C. Resource endowment of the private agricultural sector and farming practices ..	205
D. The employment situation in the private agricultural sector	210
E. Production performance of the private agricultural sector	212
CONCLUSION: rural poverty and the need for an agricultural reform	215
NOTES	219

Chapter III.The Algerian agricultural revolution	
INTRODUCTION	225
A. The objectives of the agricultural revolution	226
B. The implementation of the first stage of the agricultural revolution	227
a. The nationalisation of public land	228
b. The nationalisation of private land	229
C. The assessment of the nationalisations	232
D. The formation of the AR sector	235
a. The co-operative system	237
b. The balance sheet of the agricultural revolution sector	240
E. The impact of agricultural revolution and its limits	242
a. The immediate achievements of the agricultural revolution.....	242
and its limits	
b. The implications of the AR on co-operatives and the average	244
properties	
F. Agricultural revolution vrs land reform	247
CONCLUSION	251
Notes	254
 CONCLUSION to Part III	 262

Part IV. The mode of regulation of labour power and the state of food needs

Introduction to Part IV	265
-------------------------------	-----

Chapter I.Food consumption in Algeria

INTRODUCTION	269
I.Preliminary methodological remarks	269
II.The major findings of the 1968 survey	271
A. Methodology	271
B. The quantitative findings of the household expenditure survey (HES)	272
a. Distribution of food consumption by stratum and region	272
b. Food consumption by socioeconomic categories (SEC):	274
a quantitative approach	
b.1. Horizontal presentation of food intakes between SEC:	275
the case of the highest and lowest intakes	
b.2. Vertical presentation of food intakes by SEC	277
C. The nutritional aspect of food intakes of the Algerian population	280
a. The determination of calorie needs	281

b. The determination of protein intake	282
c. Profile of the nutritional intake of the population	283
d. Nutritional characteristics of the diet of the population	284
1. The high-cereal calorie diet	285
2. The low-cereal calorie diet	286
D. Food consumption and income	287
III. The 1980 household expenditure survey	292
A. The food intake by stratum	293
B. Income level and household distribution by stratum	297
IV. The comparative results of HESs and the F.A.O food balance sheets (FBS)	300
CONCLUSION	304
NOTES	306

Chapter II. The Algerian food policy and its management: regulation of the value of labour power

INTRODUCTION	312
I. The characteristics of the state food policy	313
A. The international intervention of the state	313
B. The state intervention on the domestic market	314
a. The cereal policy	315
b. The scope of non-cereal subsidised products	322
1. Animal products	322
2. Vegetable products	322
3. Vegetable oil and fat	323
4. Sugar and coffee	323
C. The role of subsidies in the state food policy	327
II. The impact of the state food policy	329
A. The strategy of importing boards	329
B. The price effects of the state food policy	330
a. The immediate effects of the state food policy	330
b. The effects of the state policy on the private sector	331
C. Food policy of import substitution	338
a. Import substitution and dependency	339
b. Import substitution and economic inefficiency	341
CONCLUSION	343
NOTES	346

OVERALL CONCLUSION OF THESIS	354
------------------------------------	-----

Appendix

Appendix A	360
Appendix AI	363
Appendix AII	365
Appendix AIII	369
Appendix AIV.....	373
Bibliography	382

List of tables

Within the text

Table N°	Title	Page
I.1	Consumption tax differentiation between Algerians and French	30
I.2	State budgetary resources (distribution of taxes):1901-1915 (U: Fr Millions)	32
I.3	Volume of land transfers in favour of colonists	34
I.4	The extension of the colonial wine growing sector between 1880 and 1930	37
I.5	Land area under cereal cultivation (ha) excluding fallow land between 1872 and 1928	39
I.6	The mechanisation of the colonial cereal agriculture in 1900-1930 (Unit:number)	39
I.7	Yields trends in the colonial cereal farming (quintal/ha) 1909-1929	40
I.8	Structure of land distribution in the colonial sector (1950)	41
I.9	Distribution of European crops between the different types of farms (%)	43
I.10	Employment structure of the European farms in 1950 (U: number)...	45
I.11	The land holding structure of the Algerian agriculture (1950)	46
I.12	Structure of the indigenous agricultural sector (Number, % and ha)...	48
I.13	Rural proletariat and structure of the agricultural population (1901/1930)	51
I.14	Comparative degree of mechanisation of the indigenous sector (1930). 51	
I.15	Structure of loans among Europeans in 1925 (U: Fr Francs).....	53
I.16	Loans granted by the S I P: 1900/1934 (U: Fr millions).....	54
I.17	The agricultural credit distribution in 1954-1960 (U: Fr millions) 54	
I.18	Level of production (1939/45)	56
I.19	Mechanisation trend in the colonial agricultural sector after World War II (1947/1960)	57
I.20	Balance sheet of Algeria at the end of colonisation	58
II.1	Development and structure of consumption of primary energy for..... 1960 and 1970 (U:million Coal Units), and 1980 ((U:million tons of oil equivalent)	85
II.2	Distribution of oil surplus-profit between ground rent, petroleum ...	91

	taxes in importing countries and company profits (U: US \$ million)	
II.3	Magnitude of planned investment at current prices (Millions of AD)...	98
II.4	The accumulation effort as a percentage of GDP	98
II.5	Comparative investment effort for some selected countries	99
II.6	Share of industry in total planned investment	100
	(U: Millions of AD at current prices)	
II.7	Overall structure of industrial investments	100
II.8	The economic weight of hydrocarbons in the Algerian economy	102
	(U: Billions of AD & %)	
II.9	Share of hydrocarbons in total export earning (%)	103
II.10	Structure of industrial investment excluding hydrocarbons	105
	(U: Millions of AD and %)	
II.11	The financing sources of capital accumulation (U: AD millions)	109
II.12	The net foreign earning contribution of the hydrocarbon sector	110
	(U: US \$ Billions)	
II.13	External debt of Algeria (U: US \$ Millions and %).....	112
II.14	Total debt service (U: US \$ million)	113
II.15	Distribution of employment creation between the different spheres	116
	of production during the different development plans (U: 1,000)	
II.16	Employment situation between 1967 and 1982 (U: 1,000)	116
II.17	Evolution of the rate of unemployment (U: 1,000)	119
II.18	Sectoral distribution of income and population (U: %)	120
II.19	Income distribution during the First Four Year Plan	121
III.1.1	Farms structure of the SMS (1964/1965).....	166
III.1.2	Farm machinery situation in the SMS (1978).....	169
III.1.3	Trend in the number of tractors: 1967-1977 (U : 1, 000 units)	170
III.1.4	Proportion of out of order tractors (%).....	171
III.1.5	Consumption of fertilisers by the SMS: 1966/77 (U: million	172
	of fertilising units)	
III.1.6	cereal yields U: Q/ ha	172
III.1.7	Evolution of the labour force of the SMS (U : 1,000) (1966 : 100)...	174
III.1.8	Number of days worked (U: million days)	174
III.1.9	Average number of days worked	174
III.1.10	Determination of the theoretical level of employment: case of 250	175
	days/year (U : 1,000 workers)	
III.1.11	Evolution of the cost of manpower: 1963-71 (U: AD million)	176
III.1.12	Trend in the agricultural wage rate (U : AD/8 hours work)	177
III.1.13	Labour cost in total cost (%)	177
III.1.14	Age structure of Mitidja workers	178

III.1.15	Evolution of the main products of the SMS:1965/74 (1965: 100)	179
III.1.16	Production prices index (1965: 100)	180
III.1.17	Evolution of the value of some agricultural output of the estates.....	180
	(U: AD million at current prices)	
III.1.18	Production performance weight of the SMS.....	181
III.1.19	Yields of the major crops of the SMS: 1970/1980 (U: quintal/ha)	181
	and hectolitres/ha)	
III.1.20	Evaluation of the renewal of certain fixed factors of production	182
	during 1967/74 (U: AD 1,000)	
III.1.21	Gross financial results of the state sector (U= AD million).....	184
III.2.1	Topographic distribution of the private sector.....	194
III.2.2	Structure of the private agriculture sector in 1950	195
III.2.3	Structure of the private agricultural sector in 1965	196
III.2.4	Structure of the private agricultural sector in 1973	197
III.2.5	Fluctuation in the area and the number of farms over 50 ha	197
III.2.6	Weight of subsistence agriculture in the private sector	200
	(by number of farms and farm areas in ha)	
III.2.7	Distribution of working household members (U :1,000).....	201
III.2.8	Distribution of selected fixed factors of production by size of farms	206
III.2.9	Distribution of main crops by class of area	206
III.2.10	Trend in the cereal production price index (1963:100)	207
III.2.11	Distribution of agricultural land according to the land tenure	208
	system (%)	
III.2.12	Trend in the main agricultural agricultural products of the	211
	private agricultural sector (1966/67: 100)	
III.2.13	Pattern of yields in the private sector for 5 main crops	211
	(U: quintal/ha)	
III.2.14	Agricultural employment (U : 1,000)	212
III.2.15	Share of farm employment	213
III.2.16	Distribution of total employment in the private agricultural sector ...	213
III.2.17	Comparative sectoral distribution of agricultural employment (%) ...	216
III.3.1	Land under private ownership (U: 1,000 ha)	233
III.3.2	Distribution of the 4 main categories of landowners according	233
	to their respective status vis-a-vis the AR as established by the	234
	APCEs (%)	
III.3.3	Results of land nationalisation	235
III.3.4	Distribution of the different forms of co-operatives in the ARS	238
III.3.5	Distribution of the different forms of co-operatives by area	238
III.3.6	Distribution of beneficiaries in the co-operative sector in 1975/76..	239

III.3.7	Structure of the agricultural revolution sector in 1978	240
III.3.8	Selected production performance of the CS (1974/75: 100)	241
III.3.9	Origin of incomes of independent farmers as a % of total income	260
IV.1.1	Structure of food intakes (U: kg/person/year) in 1968	272
IV.1.2	Food discrepancies between social groups in 1968	276
	(U: kg / person / year)	
IV.1.3	cereal intakes for Algeria without Grand Algiers in 1968	278
	(U: kg/person/year)	
IV.1.4	Structure of intakes between two typical social groups in 1968	280
	(% weight)	
IV.1.5	Nutritional characteristics of intakes in 1968	283
IV.1.6	Average per head intakes (Algeria without Grand Algiers) in 1968	285
IV.1.7	Share of income** devoted to food (%) in 1968	287
IV.1.8	Comparative weight of food expenditure in total income (%)	288
IV.1.9	Household distribution by income level (in AD) and social	289
	category (%) in 1968	
IV.1.10	Food intake and income level (in AD) in the urban stratum in 1968 ...	290
IV.1.11	Food intake and income level (AD) in the rural stratum in 1968	290
IV.1.12	Level of food intake by stratum (U: kg/head/year) in 1980	293
IV.1.13	Incremental rate concerning the main food intakes by stratum (%)	295
	between 1968 and 1980	
IV.1.14	Food gap trend between the urban population and the rural	296
	population: 1968-1980 (U: kg/head/year)	
IV.1.15	Structure of food intakes by stratum between 1968 and 1980	297
	(kg/year/head and %)	
IV.1.16	Distribution of households by their level of expenditure in 1980	298
IV.1.17	Distribution of households expenditures by stratum in 1980	299
IV.1.18	Distribution of social categories by level of per head	299
	total spending and food spending in 1980	
IV.1.19	Comparative findings of FBSs and HESs (U: kg/head/year)	300
IV.1.20	Rates of self-consumption (% share of intake/person/year)	301
IV.1. 21	Adjusted FBSs (kg/person/year)	302
IV.2.1	% contribution of food imports to apparent food consumption	314
	[imports/(domestic supply +imports)]	
IV.2.2	Domestic cereal production accruing to the cereal board	316
	(U: million tons)	
IV.2.3	Trend in cereal prices: 1964-1977 (AD/ton)	319
IV.2.4	Price subsidies at consumer level (U: AD Million)	320

IV.2.5	Distribution of total cereal subsidies: 1974/81 (U: AD million)	320
IV.2.6	Retail price index for cereal products: 1969/83 (1971= 100)	321
IV.2.7	Retail price index of non-cereal products between) 1969-83 and 1983(1969=100 except for dry beans 1971= 100)	324
IV.2.8	Price subsidies accruing to vegetable products: 1974/81 (U: AD million)	326
IV.2.9	Overall distribution of food subsidies: 1974/81 (AD million).....	327
IV.2.10	Consumer price trend for few products available through the private market (1969: 100, except for 1971: 100) AD/KG	332
IV.2.11	Production trends for certain products marketed in the private market (U: 1,000 tons)	333
IV.2.12	Animal feed (imports + domestic production) between 1970 and 1981 (U: 1,000 tons)	336
IV.2.13	Animal feed requirements and domestic cereal production..... (U: 1,000 tons)	337

Tables within the Appendix

A 1.1	Example of certain regional and communal budgetary resources (1901-1905)	364
A II.1	Structure of borrowing (structure of debt outstanding disbursed).....	365
A II.2	Evolution and structure of the population	366
A II.3	Distribution of oil surface area between national and international oil companies (U: km2)	368
A II.4	Structure of oil production (U: million tons)	368
AIII.1	Distribution of GDP by main sectors	370
AIII.2	Structure of employment in the total agricultural sector (Number) ...	371
AIII.3	Farm machinery of the ARS (1978)	371
AIII.4	Comparative yields in the different agricultural sectors	371
AIII.5	Balance sheet of withdrawal by the beneficiaries of the AR measures ..	372
AIII.6	Share of the cost of seasonal workers for 5 co-operatives in the Wilaya of Algiers in 1974/75 (U : AD 1,000)	372
AIV.1	Population distribution by stratum and by district in 1968	374
AIV.2	Household distribution	374
AIV.3	Survey sample	375
AIV.4	Pulses, vegetables and sugar intakes for the Algeria without Grand Algiers in 1968 (U: kg/person/year)	376
AIV.5	Fruits, meat and dairy products intakes for Algeria without Grand Algiers in 1968 (U: kg/person/year)	376
AIV.6	Oil, fats and animal products for Algeria without Grand Algiers in 1968 (U: kg/person/year)	377

AIV.7	Calorie needs of the Algerian population in 1968	378
AIV.8	Protein needs of the Algerian population	378
AIV.9	Population distribution by stratum in 1980	379
AIV.10	Structure of cereal consumption (kg/head/year and %)... ..	379
AIV.11	Index trend of cereal production prices* (1965: 100)	379
AIV.12	Movement of consumer prices and import prices (AD/ kg)	380
	ans its effect on the level of gross margin (U: AD million)	
AIV.13	Structure of cereal land	381
AIV.14	Structure of the market garden product sector	381
	(U : 1,000 HA and %)	

List of figures

Within the text

II.1	Exchange-value relation of main energy sources on world market 88
	(U: D.M/1,000 C.U.s)
III.1.2	The supporting structures of the self-managed estates 163
IV.2.2	Overall marketing network for cereals 316

Within the Appendix

III.1	The marketing network of the self-managed estates 369
AIII.2	Overall pattern of growth of the overall number days worked 370

List of maps

Algeria in its North African context (Appendix A1.1).	363
---	-----

Abbreviations

ALN	Armée de Libération Nationale. The National Army of Liberation
APC	Assemblée Populaire Communale. The popular Communal assembly
APCE	Assemblée Populaire Communale Elargie. The enlarged Popular Communal assembly
APW	Assemblée Populaire de Wilaya. The Popular Assembly of the Wilaya
APWE	Assemblée Populaire de Wilaya Elargie. The enlarged Popular Assembly of the Wilaya
AR	Agricultural Revolution
ARS	Agricultural Revolution Sector
BCA	Banque Centrale d'Algérie. The Central Bank of Algeria
BEA	Banque Extérieure d'Algérie. The External bank of Algeria
BNASS	Bureau Nationale d'Animation du Secteur Socialiste. The National Bureau of Animation of the Socialist Sector
BNBV	Bureau Nationale pour la protection des Biens Vaccants. The National Bureau for the protection of Vacant Assets
CAAM	Coopérative Agricole des Anciens Moudjahidines. Agricultural Co-operatives of war veterans
CACAM	Caisse Algérienne de Crédit Agricole Mutuel. Mutual fund for agricultural credit
CAEC	Coopérative Agricole d'Exploitation en Commun. The Common Exploitation of Agricultural Co-operatives
CAPCS	Coopérative Agricole Polyvalente Communale de Service. Multivalent communal Co-operative for services
CAPER	Caisse d'Accesssion a la Propriété et a l'Exploitation Rurale. Land fund for access to Rural property
CAPRA	Coopérative Agricole de Production de la Révolution Agraire. Agricultural Revolution Production Co-operative
CCG	Coopérative de Comptabilité et de Gestion. Accounting and management Co-operative
CCRA	Centre Cooperatif de la révolution Agraire. The Co-operative Centre of Agricultural Revolution
CNEP	Caisse Nationale d'Epargne. Saving Bank
CNRA	Centre National de la Révolution Agraire. The national centre of the Agricultural Revolution
CNRERSR	Centre Nationale pour la Recherche en Economie Rurale et Sociologie Rurale. National centre for rural economy and rural sociology
COFEL	Coopérative de Fruits et Légumes. Co-operative for fruits and vegetables
CORE	Coopérative d'Ecoulement. International marketing Co-operative

CORA	Coopérative de la Réforme Agraire. Domestic marketing Co-operative
CS	Co-operative Sector
CUMA	Coopérative d'Utilisation du Matériel Agricole. Co-operative for the utilisation of farm machinery
DAD	Direction Agricole Départementale. Departmental Agricultural Division
DAW	Direction Agricole de Wilaya. Agricultural office of the Wilaya
EGA	Electricité & Gaz d'Algérie. Electricity & Gas of Algeria.
FAD	Fond Algérien de Developpement. Algerian Development Fund
FBS	Food Balance Sheets
FLN	Front de Libération Nationale. Party of national liberation
GAI	Groupement Agraire d'Indivisaires. Agricultural Grouping of Owners in Joint-Possession
GEP	Groupement d'entraide paysanne. Grouping of Peasant Mutual Help
GMV	Groupement de Mise en Valeur. Grouping of Land Development
GPRA	Gouvernement Provisoire de la République Algérienne. Provisional government of the Algerian Republic
HES	Household Expenditure Survey
HBS	Household Budgetary Survey
IS	Import Substitution
II	Industrialising Industries
IVV	Institut Viti-Vinicole. Vine Institute
MARA	Ministère de l'Agriculture et de la Réforme Agraire. Ministry of agriculture and agricultural reform
OAIC	Office Algérien Interprofessionel de Céréales. Interprofessional board for cereals
OAT	Office Algérien de Tourisme. Algerian Tourist Board
OFLA	Office des Fruits et Légumes d'Algérie. Marketing board for fruits and vegetables
ONAB	Office Nationale pour l'Alimentation du Bétail. National office for animal feed
ONACO	Office Nationale de Commercialisation. National marketing board
ONALAIT	Office Nationale de Lait et produits laitiers. National board for milk and dairy products
ONAMA	Office Nationale Algérien du Matériel Agricole. National office for the use of farm machinery
ONAP	Office National de Pêche. National Fishery Board.
ONAPO	Office Nationale Algérien des Produits Oléicoles. National marketing board for olive products
ONCV	Office Nationale de Commercialisation des produits Viti-vinicoles. National marketing board for wine

ONRA	Office National de la Révolution Agraire. National office of agricultural revolution
ONT	Office National de Transport. National Transport Board
PAS	Private Agricultural Sector
PS	The Private Sector
SAP	Société Algérienne de Prévoyance. Algerian provident society
SIP	Société Indigène de Prévoyance. Indigenous provident society
SME	Self-Managed Estates
SMF	Self-Managed Farms
SMS	Self-Managed Sector
SNCFA	Société Nationale des Chemins de fer d'Algérie. National Railway Company
SN-SEMPAC	Société Nationale des Semoules, Pâtes et Couscous. National Enterprise for Semolina, Milling, Pasta and Couscous
SONATRACH	Société Nationale de Transport et de Commercialisation des Hydrocarbures. National Oil Company
SPC	Socio-Professional Categories
UGTA	Algerian Workers' Union
UMA	Union de Matériel Agricole. Union for farm machinery (machinery section of the SIP/SAP)
UNCAC	Union des Coopératives Agricoles de Commercialisation. Union of marketing co-operatives (fusion of CORE and CORA)

Glossary

Achour	Direct Muslim tax to which any Muslim is formally bound. Under colonisation <i>achour</i> was a tax levied on privately owned land assets (the literal meaning of <i>achour</i> refers to the "tenth").
Azel	State rented land.
Bey	Turkish representative of regional power in Algeria
Bled	Popular designation of Country.
Chefaa	A muslim legal rule which fulfills the function of preservation and protection of the community land asset. It essentially prohibits all forms of land alienation in favour of a non-muslim entity. The aim of chefaa was essentially the preservation and consolidation of the material asset of the community.
Course	Maritime practice of corsairs geared towards plunder and violent appropriation of wealth.
DEY	Turkish representative of central power in Algeria
Fellah	Popular denomination of the Algerian peasant farmer.
Hokor	Inspired muslim direct tax levied on collectively owned land or on the fraction of state rented land. Hokor was a form of communal direct tax.
Janissary	Turkish soldier at the service of the Ottoman Empire in Algeria preceding the French colonisation of Algeria.
Khammes	Sharecropper to the fifth.
Lazma	Inspired muslim direct tax levied on individuals.
Makhzen	Strictly speaking, it refers to 'treasury'. By extension, a makhzen tribe was a tribe which collaborated with the Turkish central power and as such acquitted its tax dues to the Turkish authority. A makhzen tribe was therefore that which financed the treasury fund of the Turkish power.
Odjak	A Turkish military cast of officers.
Rahnia	Muslim legal procedure used by usurers to acquire on relatively easy terms the fraction of the land under indivision rule which is not mortgaged because one of the co-owners is not able to meet the payment of the borrowed capital.
Raya	Raya or <i>siba</i> tribes rebelled against the authority of the central Turkish power. As such, as a result of the military weakness of the Turkish power, these tribes were not able to acquit their tax dues. The expression <i>bled siba</i> refers to the territory upon which the authority of such tribes extended.
Wilaya	Administrative district (Wilayate is the plural of Wilaya)
Zakat	Direct Muslim tax which is calculated in proportion to the size of livestock. It was a form of tax on wealth.

Abstract

The aim of this work is the study of the context under which the development of capitalist relations of production in Algeria affected the conditions of reproduction of labour power at subsistence level. More specifically it is argued that as a result of the specific characteristics of capitalist development in Algeria, a constant time-lag prevailed between the extension of wage labour and the conditions of production of the value of labour power.

Part I investigates the historical roots of this dichotomy by looking at the outcome of the penetration of capitalist relations of production accompanying the emergence of a colonial capitalist agriculture. More specifically this part assesses the extent of the contradiction existing between the generalisation of commodity relations at the level of the social formation and the increased proletarianisation of the indigenous population.

Part II assesses the conditions under which the post-colonial strategy of capital accumulation became possible, and how it tackled the inherited colonial contradiction. By considering the emergence of the post-colonial state and the impulse of oil rent, the thesis investigates the configuration of the industrial policy proper and its effects from the view point of the extension of capitalist relations of production on the conditions of reproduction of labour power.

Part III takes up the issue of the impact of the post-colonial policy of accumulation, particularly from the standpoint of the diffusion of wage earning relations on the conditions of production of wage goods. The mode of production of the food component of labour power is considered in both the capitalist and the non-capitalist sectors. The variety of capitalist forms of land ownership is taken into account. *Vis-à-vis* the

established capitalist public sector the thesis assesses the interwoven relation that exists between the state mode of control over agricultural surplus and the poor conditions of performance of the sector itself. Within the private sector the penetration of capitalist relations of production is perceived in terms of the social differentiation achieved. The promotion of agrarian transformations based on the suppression of absolute ground rent and capitalist farming is assessed in terms of its effects upon the elevation of agricultural output and the alleviation of rural unemployment. More specifically this part studies the impact that capitalist state agriculture and the reform of agrarian structures have produced in terms of the emergence of an agricultural surplus in the form of wage goods to meet the constraint created by the development of the wage-earning system accompanying industrial capital accumulation.

Part IV deals directly with the state mode of management of the food constraint. An appreciation of the main patterns of food consumption of the different social groups, particularly as they emerged in the aftermath of the policy of accumulation and wage earning diffusion, helps locate the terms of the contribution of domestic production and food imports. More specifically this part provides for the terms of access to food patterns in the form of a food management of labour power. The main proposition that runs through this final part is that the state food policy based on the supply of wage goods at fixed prices is essentially the manifestation of a policy whose objective corresponds to a mode of regulation of the value of labour power most compatible with the fulfilment of the realisation of the conditions of valorisation of capital itself.

INTRODUCTION

The subject matter of this thesis is concerned with the status that food crisis assumes in the face of capital accumulation. Capital accumulation is here understood as a social process of production whereby the valorisation of capital is operated via the productive consumption of labour and the accumulation of surplus value: capital as a self-perpetuating value thus refers to the process of capital as a dominating social relation of production. Our main proposition is that food crisis not only represents the archetype of agrarian contradiction proper to third world social formations, but is also the condition upon which the development of capitalism proceeds in such countries. Indeed, in the current literature devoted to the agrarian question in less developed countries, little consideration has been given to such a specific aspect of the question. The main shortcoming associated with an overemphasis on the exclusive food aspect of agrarian crisis is the fact that it hides the very condition upon which the reproduction of labour power itself actually takes place . Our main proposition is that the state food policy based on the supply of wage-goods at fixed prices is essentially the manifestation of a policy whose objective corresponds to a mode of regulation of the value of labour power most compatible with the fulfilment of the realisation of the conditions of valorisation of social capital itself. The management of the exchange value of labour power, essentially regulated by the value of foodstuffs, therefore indirectly sets the conditions under which capital is allowed to productively consume labour power or the objective conditions under which surplus produce is generated (for a given produce, the determination of the value of labour power sets that of surplus produce itself). Rather than food crisis leading to the control of the value of wage foods, it is assumed that the requirement of the regulation of the value of labour power based on the promotion of cheap food-cheap labour policies which, in the last analysis, commands the whole methodology. As such the issue raises not only the study of the agrarian question from the viewpoint of the impact of its capitalist development, but also the conditions under which the process of capital accumulation is interrelated

with the determination of the value of labour power through the supply of wage goods (particularly since at subsistence level the price of labour power is that of wage goods). As a result of the requirement of capitalist development the conditions of reproduction of wage labour becomes directly dependent on the conditions under which the value of labour power is obtained through a policy of regulation of the value of wage goods, a strategy of production of such goods.

The main contention of this thesis is that, as a result of the particularisms of the historical development of capitalism in Algeria, a constant gap persisted between the diffusion of wage relations and the production of wage goods, with the development of the former taking an advance on the latter. Contrary to the prevalent theses on third world food crisis which tend to be partial and non functionalist in their methodology (see Appendix A), it is our main proposition that the present agro-food situation characterising Algeria is the result of the direct requirement imposed by capitalist development itself. The promotion of cheap food policies aimed at producing cheap labour, becomes the correlate of the promotion of capitalist relations of production. But if it is in the interest of capital to employ cheap labour, the promotion of cheap food policies in turn acts as a depressing factor upon the agricultural section producing wage foods. The management of such a contradiction which therefore maintains on the one hand the promotion of capitalist relations of production while on the other perpetuates the material basis of agrarian crisis, represents the substance of our problematic. The particularisms of the Algerian experience are also those of a social formation belonging to peripheral capitalism. As the historical product of a capitalism of colonisation, the contemporary Algerian social formation is also characterised by three fundamental attributes.

1. The agrarian transition along capitalist lines is an on-going process. This point, which is often overlooked (particularly in the Algerian economic literature), is however of great importance to the significance and understanding of the Algerian case.

The main cause of neglect of such a point seems to come from a lack of appreciation of the particular historical forms of development of peripheral capitalism. Understood through a transposition of the scenario of the development of capitalism which characterised industrialised countries, the diffusion of wage relations and wage labour did indeed coincide, particularly at the early stage of the industrial revolution, with the conditions of production of the value of labour power as embodied in the quantum of wage foods necessary to its reproduction. Such a scenario illustrates the historical case whereby the industrial development of capitalism coincided with the capitalist development of agriculture resulting in the substantial elevation of agricultural surplus. However, the problematic of development of capitalism in its Algerian context does not yet conform to such a process. The historical penetration of capitalist relations of production in agriculture in Algeria has not, strictly speaking, resulted directly from within the social formation's own internal social dynamic; rather it has been imposed on it from outside. In comparison to the classic scenario of capitalist development in Europe whereby the emergence of the capitalist relations of production was the product of the internal unfolding of the contradictions contained within the feudal mode of production, the history of capitalist development in Algeria was atypical in all aspects. Given such an historical particularism of the development of capitalism, the treatment of the agrarian question ought to be assessed in a transitional phase, i.e. a process whereby a progressive capitalist transformation of the social relations of production in peasant agriculture is still taking place under the impetus of an essentially urban industrial capital accumulation. The assessment of the relation between capital accumulation and the agrarian question is therefore an assessment proper to a social formation whereby the social division of labour at the level of agriculture is still operated on the basis of a preservation of simple commodity production and peasant economy, the reproduction of household farming guaranteeing the production of cheap labour and therefore cheap food. Indeed under the impetus of the penetration of capitalist relations of production the peasant economy acted *de facto*

as a reservoir of cheap labour: as a producer of use values rather than exchange values, i.e. an exchange relation whose generalisation defines more the capitalist firm which aims at the realisation and accumulation of profit than the household unit cycle which is regulated by simple reproduction. Here the household unit integration in the social division of labour is operated on the basis of the exchange of use-values against marketed commodities in order to meet part of the direct consumption of the household members, and/or the acquisition of industrial inputs for productive consumption purposes.

The conventional classic debate about the capitalist transformation of agriculture does not however revolve around capital accumulation and food production per se (which is part of the focus of our problematic), but mainly focuses on the fate of the peasantry as a social category. This is not to say however that the conditions under which the peasantry and its components are being reproduced and/or differentiated do not bear a powerful relation to the conditions of formation of agricultural surplus. The polarity in the debate is whether the capitalist penetration of agriculture does or does not bring about the economic elimination of the peasantry. In such a context the whole question revolves around the existence or absence of a strictly peasant mode of production. When the existence of such a mode is asserted, the theorisation of the agrarian question is usually assessed in terms of articulation between the precapitalist and the capitalist modes of production. From an historical perspective the debate which opposed the Russian bolsheviks (with V. Lenin), the populist Narodniks (with V.P. Vorentstov and N.F. Danielson), and the neo-populist A.V. Chayanov, as well as K. Kautsky and the German Social Democratic Party etc., revolved around the survival of the peasantry (from the viewpoint of the peasant mode of production), or its disappearance (from the prospect of the dominance of the capitalist mode of production). According to the latter position, though the category of peasantry belongs *à part entière* as a class to the precapitalist mode of production, its status in a capitalist mode of production is that of a fraction of class which assumes by definition only a transitional, non-

permanent form, and as such represents a fraction of class whose ultimate development will be regulated by the outcome of the social differentiation resulting via its social decomposition into a class of capitalist farmers on the one hand, and a rural proletariat on the other (under the capitalist mode of production peasants no longer assume the function of stability which was theirs in the precapitalist mode of production, but rather are bound to disappear as a class). Though the proponents of the peasant mode of production are aware of the increasing dominance of the capitalist mode of production, their entire analysis remains basically imprisoned by the theorisation of the household economy perceived within itself and not so much in terms of the progressive alteration of its features as a result of the increased commoditisation and the development of capitalism (see Bernstein on this point).

The whole Marxist debate which revolves around the theoretical assessment of the capitalist development of agriculture however raises some important issues for the characterisation of peripheral agriculture. Marx's position on the tendency of capitalist agriculture is clear: the capitalist transition of agriculture leads to the emergence of large-scale units operated by capitalist farmers. In itself such a movement would imply that the emergence of a capitalist agriculture was based on the expropriation of the peasantry and the concomitant emergence of a proletariat. In Marx's view the fate of the peasantry was sealed and their economic survival was not considered. As G. Djurfeldt put it "an expansion compatible with small scale production is an exception to Marx's view" (1).

Kautsky's writings, considered by scholars as a continuation of Marx's 'Capital', reached the same conclusion. The concentration of land in big estates is bound to emerge as the main tendency of the capitalist development of agriculture under the effects of the economies of scale obtained through crop specialisation, the use of machines, labour, agronomists etc. The economic superiority of large scale estates was also evident in terms of access to credit and marketing facilities. As a result of the

particularism of agriculture by opposition to industry, Kautsky was however "much less insistent than Marx has been that economies of scale in capitalist production favoured the large agriculturalists" (2). Since the extension of area under cultivation does not make a large estate more efficient, "a smaller holding cultivated on an intensive basis constitutes a larger enterprise than a bigger farm that is exploited extensively" (3). In other words Kautsky's position is that the fate of the peasantry as a future proletariat can be delayed but not avoided.

While sharing the same view as Marx and Kautsky on the main tendency of capitalist development of agriculture, Lenin provided for the characterisation of agrarian transition proper. Under increasing commoditisation of production the formation of the rural class structure is operated via a process of peasant differentiation. Though Lenin's preference is for a farmer mode of capitalist development of agriculture, the outcome of the differentiation is inevitably in favour of two main classes: the rural bourgeoisie/capitalist farmers and a rural proletariat. This position is also held by T. J. Byres who even sees social differentiation upon which is based the emergence of a leading class of capitalist farmers as a prerequisite "before capital can begin to realise its full potential" (4).

The experience of Third World countries shows that the movement of social differentiation is not that of a concentration of farms accompanied by a reduction of small scale units, but rather one accompanied by a parallel movement: a fragmentation of small scale units. Such a movement does not by itself contradict Marx's proposition since the formulation of the tendency of capitalist development ought to be distinguished from the concrete manifestation of its development. Moreover the forms under which capital manifests itself depend to a large extent on the concrete conditions under which it operates. What is at issue at this level is the mode of interpretation of a theory which initially focused mainly on the agricultural development of Europe and Russia. In the context of peripheral countries the terms of the problem are to be reformulated since neither the rapid development of agrarian capitalism nor the

survival of the peasant economy can be ignored. Here the issue does not rest on "the question of the future of small scale farming alone; on the contrary, we should look for all the changes which agriculture experiences under the domination of capitalist production" (5). The conditions under which the agrarian development of peripheral countries proceeds tend to suggest that the type of farm most identified with the capitalist development of agriculture is the average farm and not the large one.

Two factors determine such a characteristic: the nature of industrial development occurring in most peripheral countries, and the impact that the survival of small scale units has *vis-à-vis* average and large estates. As far as the mode of industrialisation is concerned, the conditions under which capital accumulation have been proceeding has not been able to generate a self-sustained industrial development capable of absorbing a sustained mass of pauperised peasants within the ranks of the industrial proletariat. This form of industrialisation in turn affects the mode of development of agriculture which thus loses "its former independence and becomes bound up with social development as a whole" (6). Under the conditions of an expanding urban cheap-wage food demand the diffusion of capitalist relations of production in agriculture necessarily acquires its own particularism. As a result of the peasant characteristic of agriculture it becomes possible for capitalist farming to be operated essentially on the basis of 'unfree' labour still bound to the small holding. In such a context the economic conditions under which peasants are reproduced are essentially precarious; this is because of their ability to sell their produce at its cost-price, incorporating an even lower level of personal consumption. The terms of competition between small scale and larger units and "the resistance that the peasant farm puts up before the large holding is based not on its higher productivity but on its lesser needs" (7). Being the least dependent on hired labour, it is the average farm which is most able to combine the characteristics of capitalist units (the production for the market) and peasant farming (the use of family labour). Given such conditions it also becomes very difficult for such farms to escape in turn an intense process of internal differentiation as kinship

relations are used as a surrogate for wage relations based on 'free' labour. Compared to average farms, large estates therefore enjoy both lower family labour facilities and higher wage bills even in the context of an essentially peasant economy. Here the industrial requirement of cheap food also acts as a deterrent *vis-à-vis* this type of farm.

In so far as our problematic bears a relation to the fate of the peasantry, the study of the impact of capitalism on the peasantry is significant not only from the viewpoint of the food aspect of the question (peasant agriculture being by definition based on simple commodity production, or a strictly speaking subsistence farming), but also as a result of the terms under which the process of differentiation itself is taking place: peasant production is increasingly regulated - depending in its intensity on the specific path of capitalist development of agriculture - by market mechanisms, and the preservation of the household unit as an economic activity is maintained only at the cost of an increasing differentiation resulting in the semi-proletarianisation of its members (reflected in the dual status of the existence of peasant-workers), and/or simple proletarianisation (assuming the status of agricultural and/or industrial workers).

2. The conditions of capital accumulation in post-colonial Algeria are determined by a form of a surplus whose realisation takes place mainly on the international market. In other words the generation of economic surplus acquires in the main the features of mining rent in the specific form of oil rent generated on the world energy market. Both as a form of economic surplus and as a source of investment and accumulation, oil rent (or the ability of oil to capture, as a result of the existence of differential rents, surplus profit on the international energy market), acquires an exceptional theoretical and economic significance. Broadly speaking three characteristics single out the strategic value of oil for third world oil exporting countries in general and Algeria in particular.

a. As the dominant form of energy consumed by developed capitalist countries, oil acquires the characteristics of a commodity whose valorisation takes mainly place on the energy segment of the international capitalist market.

b. By its location and the diversity in the natural conditions of its production, as well as a result of capital's needs for energy through machines, oil production is increasingly giving rise to the formation of differential rents above average profit (including differential rent of type I, i.e. rent "caused by natural differences between [oil fields]", and/or differential rent of type II, i.e. "caused by variations in the amount of investment in [oil fields]" (8).

c. The international distribution of oil fields is such that a great proportion located in third world countries are higher grade/low operating costs fields. As a result of a series of factors pertaining to their history (colonisation, political independence, the initiation of industrialisation, the political and economic claims of new emerging domestic classes etc.), few third world countries progressively emerged from the status of providers of rent-free oil fields to foreign oil companies, to owners/operators of oil fields. With such progressive social transformations, nationalisations of oil fields and/or the increase in international oil prices enabled many third world oil exporting countries to operate to their advantage a new international redistribution of oil surplus profit. The gains obtained from such shifts are the basis for the most ambitious industrial plans implemented in many oil exporting countries of the periphery.

The favourable international context under which Algeria has been able to appropriate its share of oil rent has profoundly marked its industrial policy of accumulation concerning both the acquisition of the objective conditions of capital in the form of the most sophisticated machines (which from an immediate point of view cannot be autonomously reproduced), and the fulfilment of the condition of reproduction of

variable capital mainly in the form of subsistence food imports. Whether in its objective (constant capital) or subjective (labour power) components, capital accumulation therefore proceeded (exclusively for the latter and increasingly for the former) on the sole contribution of oil rent. By allowing for the most intensive industrial accumulation of capital in the Algerian social formation, the mode of consumption of oil receipts and their magnitude acted as the motor-engine of social transformations of relations of production along capitalist lines.

3. As a result of the historical particularism of such a capitalism, its development proceeded more as a consequence of the deliberate state policy of accumulation than as a result of the spontaneous historical conditions associated with the emergence of an economic surplus based on an already well established social division of labour with its correlated developed classes. As such, and in the absence of well developed domestic classes (and particularly a capitalist class), the extension and development of commodity relations becomes inseparable from the post-colonial state itself. As the manager and promoter of capitalist development, the Algerian state *de facto* posits itself not only as the substitute to an absent domestic bourgeois class capable of imposing a capitalist project on the rest of society, but also as the main social force whose dominance dictates and defines the forms under which the development of such a capitalist class is to proceed.

From what precedes it can be stated that while food crisis reflected the particular conditions of development proper to peripheral capitalism, the regulation of the value of labour power via the control of wage foods became at the same time the condition under which such a peripheral capitalism could proceed. The corollary of the perpetuation of such a contradiction tends implicitly to suggest that, under conditions of peripheral capitalism, the conditions of extraction of surplus labour (though not excluding relative surplus value) are still dominated by its absolute form (the rationale of cheap food policies also contains the mechanisms of capital needs for the production of relative surplus population).

In its mode of exposition this thesis is articulated in four parts. Taking an historical perspective, Part I deals with an assessment of the extent of the destruction of the Algerian peasant economy under the impact of French colonisation. As a result of the particular violent conditions under which French colonisation served as a vector of penetration and diffusion of capitalist relations of production, the extent of agrarian transformations which occurred during the colonial presence lasting 132 years acquired an authentic character of a revolution in the agro-pastoral basis of precolonial Algeria. Parallel to successive authoritarian population displacements, the colonial power proceeded to a systematic tribal land confiscation directly geared towards the constitution of an export-oriented capitalist agricultural sector within the exclusive hands of the colonists. As a result of its greater dependence on nature for its reproduction (the relative economic autarchy that prevailed among the tribes was linked to an insufficient economic surplus which in itself was a reflection of a social division of labour which did not go beyond the threshold of the elementary agricultural division of labour), the agro-pastoral economy was unable to adapt to a profound alteration and/or shrinking of its land base. While preserved in its forms through the reproduction of the old technique of production and its labour process, the preservation of subsistence crops, the use of family labour, the ownership of land, etc., peasant economy was increasingly dominated by capitalist relations of production. The conjunction of coercive means and market mechanisms profoundly altered simple commodity production (the main characterisation of simple commodity production is a situation typical of agricultural producers who direct their activity towards the immediate internal needs of the household members through an essentially agriculturalist occupation and the development of rural industry; as such this mode of production is characterised by an identity between production and consumption). Under the requirement of capital for the maximum extraction of peasant surplus, simple commodity producers were increasingly integrated in commodity relations to

meet their needs for cash to acquit their tax dues, part of their immediate consumption as well as the acquisition of some industrial inputs necessary for the organisation of the production process. Peasants were also incorporated in capitalist relations of production as sellers of labour (this process is typical of the diffusion of commodity production which results in the progressive destruction of rural industry). The integration of peasants in both commodity and labour markets proceeded from the process under which their social differentiation was operated. Under the impact of commodity relations and the dominance of capital, peasants' integration in the social division of labour necessarily resulted - depending on their initial resource endowment in terms of land, labour etc. - in their progressive differentiation into distinct social categories. Under the historical context of the colonial development of capitalism there emerged the modern social categories of poor peasants, a category "unable to reproduce themselves by household production [and which] exchange their labour power on a regular basis and come to form a category reproduced through the sale of labour power" (9): this category encompasses landless, near-landless, sharecroppers etc.; middle peasants who are relatively able to reproduce themselves through family labour (the stability of this category is only relative); and rich peasants assimilated to capitalist farmers engaged in accumulation, producing for the market, purchasing outside labour, relying on industrial inputs and whose *raison d'être* is to make a profit.

Besides the profound alteration in the domestic agro-pastoral economy and the specific characteristics of its decomposition, the colonial era of the capitalist development of Algeria inaugurated mainly the privileged development of an important colonial capitalist agricultural sector realised at the expense of the domestic economy and catering mainly for needs outside the indigenous population (most of the colonial exports catered for French consumers and French industry while Algerian imports were, as a result of the decidedly unequal distribution of wealth and income, intended almost solely for the needs of settlers).

The cumulative effects of the drastic reduction of the land at the disposal of the tribes, the consequent alteration in their mode of farming, the weight of the demographic pressure etc, contributed to producing in the open an increasing mass of pauperised and proletarianised peasants with neither the means of producing their own subsistence as direct producers, nor the possibility of employment .

As a result of an absent domestic industry capable of absorbing the mass of pauperised peasants and the type of technological model upon which colonial farming was based (settlers resorted to an essentially labour-saving technology combining intense mechanisation - particularly in cereal farming - and the practice of seasonal labour during peak seasons in vine growing), the employment of the majority of the population depended essentially on the contribution of the peasant sector alone (only emigration was to some extent able to promote a diffusion and alteration of the increased economic marginalisation of peasants). Through its ability to reproduce labour power during a great part of the year, the peasant economy reproduced the subsistence condition of such a reproduction. *Via-à-vis* the capitalist sector, the peasant economy became not only the main supplier of labour power but also the regulator of cheap labour (during the last years of colonisation, and as a result of the massive military operation which displaced about 3 million peasants and froze all their corresponding supporting resources for 7 years, it can be assessed that the peasant economy assumed these two functions on a much wider scale).

As a result of the privileged links with France that served to consolidate the colonial sector (the colonial sector can be considered as an organic appendix *vis-à-vis* the metropolitan economy), the development of capitalist relations of production did not result in promoting a major process of capital accumulation beyond both the immediate interests of the colonists and the sphere of colonial agriculture. Based on a total rejection of the political expression of all domestic classes as well as on their economic subordination to the French bourgeoisie (which resulted in their increased

pauperisation), colonialism was not able to contain a dissent which culminated in an exclusively peasant war of liberation. The colonial inheritance after a period of 132 years was in the form of a developed capitalist agricultural sector devoid of its colonial owners (on the eve of the political independence of Algeria there was a massive exodus of European settlers towards France), a ravaged economy after an intensified all-out war of seven years, a national bourgeoisie in its infancy, an insignificant proletariat, a small class of large landowners, a large petty bourgeois class distributed among different professions, an important organised army, a predominant fraction of pauperised peasants and an absent industry. Caught in social contradictions brought about by an historical development which had wrested political control from its own domestic classes, Algeria faced a radically new situation when it gained its political independence.

Part II sets out the post colonial conditions of capital accumulation proper. As a result of the specific impact of colonisation on the class configuration of the Algerian social formation, the post colonial strategy of development emerged mainly as a result of the influence that the occurrence of oil rent produced on the financial ability of the post colonial state. The importance of a sizeable oil rent appropriated on the world energy market conferred upon the state the necessary resources that compensated for an otherwise deficient economic surplus (particularly agrarian), large enough to finance its industrial project. In this respect the diffusion of capitalist relations of production was achieved through a state legitimisation based on industrialisation. The peculiarity of such a policy is that it did not directly require a capitalist class, i.e. in its classical sense. Such a class, in its genesis, was the "creation" of the state strategy of accumulation, and as such the light industrial activities complemented the state sector of heavy industry. While creating mutually consolidating bonds between the "private" sector and the state sector, such a sectoral division of labour served as a sharp emulator in the overall development of capitalist relations of production. The promotion of industrialisation was not however limited solely to the massive

accumulation of fixed capital. The formation of an urban proletariat that such an accumulation of fixed capital enabled, was made possible as a result also of an already existing mass of "free" labourers and pauperised peasants. Under the impact of the rapid development of wage relations, peasant agriculture was no longer in a position to meet the sudden new food demand that industrialisation conferred on a growing urban population. While the constitution of a permanent industrial proletariat exhausted the dominant regulatory subsistence function performed by peasant economy, the necessity for preserving a minimum rate of return of capital dictated that the management of the value of labour power met the requirement of capital valorisation itself. Since at subsistence level the value of labour power is that of the necessary wage foods required to guarantee its reproduction, it is, all things being equal, on the management of the agricultural sector and specifically the sector producing wage goods that the objective of full development of capital accumulation at large and industry in particular will be realised. However, in the absence of a profound alteration in agrarian structures capable of providing the extra rural job opportunities, and increased agricultural production for the growing urban population, the attenuated direct effects of the state capitalist strategy on employment creation (because of a high organic composition of capital) were able to contend with neither the massive movement of rural exodus, nor the development of emigration proper. The agrarian strategy was born out of such a necessity.

In Part III consideration is given to the treatment of the agrarian question proper. The study of agrarian structures is perceived from the viewpoint of capital requirement for the availability of cheap wage foods. The realisation of such an objective is mainly assessed through the conditions under which the development of agrarian capitalism itself was promoted and which consists in the preservation and development of the ex-colonial estates under state capitalist management, and an extension of capitalist relations in agriculture via the suppression of pre-capitalist relations of production (as a matter of fact this is one of the undeclared aims behind not only the Algerian

programme of land reform but also behind most of the land reform programmes in most peripheral capitalist countries). The preservation of the peasant economy as a source of cheap food is also assessed. Overall level this part studies the conditions under which the increase in agricultural production (and subsequently rural employment) was attempted. More specifically this part assesses the impact that the ex-colonial sector and the reform of the agrarian structures have produced in terms of the emergence of an agricultural surplus in the form of wage goods to meet the constraint created by the development of the wage-earning system. The study of Algerian agriculture reveals the imbalance and unevenness existing in the different modes of production. Chapter one examines the characteristics and performance of the most advanced capitalist agriculture in relation to its state management. At the level of this sector the roots of a stagnant agricultural production associated with the state/junker form of management of the estates are clearly established. Chapter two examines the pattern of agricultural development in the so-called "traditional" sector, only to find the co-existence of different modes of farming based on different land tenure systems under private ownership stretching from pre-capitalist forms (khamassat, indivisible property or indivision), capitalist forms proper, to the substantial dominance of small peasant farmers. The relatively better performance of peasant agriculture which does not, however, cancel the overall tendency towards a stagnant food production is also assessed. Chapter three analyses the significance of the 1970 agrarian reform through its two main objectives: the simplification of the land tenure system as a whole and the extension of state capitalist agriculture in the form of the creation of a formally new sector of agricultural revolution. With the attempt to do away with all forms of pre-capitalist relations in agriculture and formally eliminating all forms of permanently hired wage labour, this chapter assesses the effect of the nominal suppression of absolute ground rent and the limits associated with the promotion of a form of farmers' agriculture based on sole owner farmers.

In Part IV the actual terms under which the supply of cheap wage foods is regulated are

considered. In addition to the direct organisation of wage food production essentially limited to the centralised management of the ex-colonial sector consolidated by the creation of a sector of "agricultural revolution", the management of cheap labour is complemented by the use of cheap food imports (as a result of the combined effects of international food surpluses - particularly European - and an overvalued rate of exchange which also cheapens all imports), and a systematic use of state domestic food pricing policy. Chapter one highlights the structure of food needs and its evolution. The terms and significance of such an evolution are followed up from the viewpoint of the parallel hierarchical distribution of food availability between the main social groups. Chapter two examines the economic and financial aspects of the policy of regulation of the value of labour power proper. Financial considerations are essentially directed through an assessment of the "cost" of food subsidies and their mode of financing. The study of the economic aspect of cheap food policy highlights for its part the contradiction contained in the deployment of a food strategy based essentially on import substitution.

In the final part of this thesis the fall of international oil prices is investigated in terms of the impact that the drastic reduction of oil rent is likely to produce on the conditions under which capital accumulation and its correlated cheap food policy has so far proceeded.

The period covered for the purpose of this research begins with the French colonisation of Algeria and ends in principle in 1980 (as a result of the economic changes inaugurated by the post 1980s new policy of liberalisation, a data reference to the post 1980s period is made only for the purpose of a trend illustration).

PART I

COLONISATION AND THE DEVELOPMENT OF AGRICULTURE

Introduction.

French colonisation in Algeria lasted 132 years. Over this period which stretched from one century into another, the colonial presence (which in effect temporally still outstrips the post- independence history of Algeria), was at the origin of the deepest modern transformations ever to be experienced by the Algerian social formation in the form of the destruction of its natural economy, the massive land confiscation and expropriation of its peasantry, the generalisation of commodity relations, the intensification of pauperisation and proletarianisation of its population, and the extension and development of the wage system, etc. From the standpoint of the pre-colonial social formation (see below), the irruption of French colonisation inaugurated an authentic revolutionary era in terms of the socio-economic effects it generated. As a result of the passage from one mode of production to another, the destruction and dissolution of the ancient order reached an intensity which was considered to have been only "surpassed in the colonisation of America" (10).

The extent of the socio-economic transformations involved on the one hand and the importance that the colonial legacy itself was to assume in the unfolding of the post-independence organisation of the Algerian economy and society on the other, largely justify the particular study of the colonial history of Algeria. More specifically the focus of the chapter essentially revolves around the conditions under which French colonisation served as a vector of penetration of capitalist relations. The driving force, under whose impetus the entire social panorama of nineteenth century Algeria was

"restructured", was embodied in the conditions surrounding the constitution of the colonial agricultural sector. As a result of its open character of an exclusively agrarian colonisation of settlement, the colonial period of Algeria can be rightly seen as the history of Algeria's first authentic capitalist agrarian revolution. The profound destruction and disorganisation of the indigenous society combined with the segregated development operated by the colonial power in favour of the exclusive interests of the settlers, ultimately created both the negation of the colonial order proper and the new conditions under which the vacuum of the colonial power now redefines the strategy of the domestic classes and groups. The full perception of such a long historical movement needs, however, to be punctuated by an appreciation (however brief) of the nature of the Algerian social formation on the eve of the colonial penetration in order to better assess both the causes behind the long period of colonisation itself (over a century), and the full extent of the French influence on the one hand, and of how the conditions under which the constitution of the colonial agricultural sector was operated, reshaped - through a drastic alteration of its material basis - the entire configuration of the Algerian social formation and set, at the same time, the new terms of development of its main groups and classes (in short the study of colonial Algeria remains inseparable from the study of a peripheral capitalist formation). Let us successively follow the progress of this movement.

I. A brief preliminary historical background: pre-colonial Algeria.

Preceding the French conquest Algeria - or rather that fraction of the Maghreb which was to become modern Algeria - was part of the Ottoman Turkish Empire whose representative was the Bey who derived his power from the military cast of *odjak* and the *jannissaries* (Turkish soldiers). The nature of Turkish power was such that it did not extend beyond a limited fraction of the population, i.e. that precisely located around the town-state. Beylical land, or rather that portion of the land out of which Beylical power drew its taxation, belonged mainly to *Makhzen* tribes (literally the tribes

which exempted the payment of Turkish taxes), i.e. those tribes which, because of their immediate location within the vicinity of the Turkish power around urban centres (11), were unable to extricate themselves from such duties. Unlike the *Makhzen* tribes whose favourable natural agricultural land basis - land fertility - allowed for the payment of a fraction of their surplus produce, the *Raya* (or *Siba*) tribes, i.e. the rebellious tribes, enjoyed a much larger autonomy and independence *vis-à-vis* the coercive Turkish tax power. The payment of taxes by such tribes was kept to a minimum. The resistance of *Raya* tribes (in fact the majority of the population) to paying tax due to the central power, a feature which has not passed unnoticed by historians such as A. Noushi, J. Berque, R. Galissot, and A. Laroui, etc., has usually been attributed to the insufficient level of agricultural surplus, which could not bear continuous deductions for tax purposes. The social scientist Lahouari Addi, who studied in detail the pre-colonial period of Algeria, clearly states this point: "As far as the Maghreb was concerned, the agricultural surplus has always been insufficient, and this insufficiency has marked its history" (12). The social condition under which the pre-colonial Algerian formation guaranteed its reproduction was achieved through an essentially tribal framework. The collective organisation of the labour process combining agriculture and livestock farming remained uniformly communal, whether in the mountainous regions, where a form of sedentary agricultural prevailed, or in the wide regions of the steppes. As a result of the limited size of agricultural surplus (itself in fact a result of a limited social division of labour), there prevailed a relative autonomy between the different tribes themselves. The existence of a large pasture land prompted a form of itinerant economic activity combining both the pursuit of livestock breeding based on the possibility of a continuous regeneration of the reproductive capacity of the land as a result of the permanent displacement of the tribe, and cereal farming in association with the use of fallow land. The predominance of one form of agricultural activity over another, stretching from the nomadic form of agriculture of the desert south based mainly on livestock breeding, the semi-nomadic form of farming proper to the population of the

high plains and the steppes combining livestock breeding and itinerant cereal farming, to the sedentary form located on the land with the highest rainfall (mountain and coastal plains) or with a sufficient water endowment (as in the case of the southern based oasis), was in all cases on the same social mode of organisation: the division of labour was operated through the communal organisation of society into distinct tribes. In turn, within each tribe the organisation of labour was performed by each distinct extended family, composing the backbone of the tribe. It was therefore on the basis of the quantity of labour deployed by the members of each extended family that the product of the tribe was distributed. Property rights existed but were exercised independently of any payment of rent. The communal ownership of the land was not however accompanied by a communal organisation of the labour process. As pointed out by L. Addi, "Nomadism does not exclude the notion of private property - on the contrary this notion is even exacerbated - but it is incompatible with private *landed* property" (13). This specific tribal framework summarised the dominant relations of production of pre-colonial Algeria. As a social form of organisation it expressed both the causes and the consequences of the insufficient development of the division of labour. Viewed from the standpoint of a poor endowment of agricultural land, the communal mode of organisation was the channel through which the reproduction of the different social groups was realised through their tribal expression. Viewed from the standpoint of the social division of labour, the tribe reproduced the same subordination, *vis-à-vis* nature, in the absence of a major agrarian technical innovation. While taking the best advantage of a hostile nature, the communal mode of organisation of pre-colonial Algeria also perpetuated such a hostility. This is what P. Anderson expresses in the following passage: "Thus organised, the nomadic societies showed admirable capabilities in getting the best out of their inhospitable environment.. However, the nomadic mode of production functioned within extremely rigid limits...Unlike agriculture the nomadic mode of production was unable to improve labour productivity for the means of production was not land which is modifiable both

qualitatively and quantitatively, but livestock which, because of its dependence on land to which nomadism does not touch, can only undergo an essentially quantitative increase. The fact that in the nomadic mode of production the means of labour and its object were to a great extent one and the same thing (livestock), imposed to the elevation of labour productivity insurmountable limits" (14). The pre-eminence of agro-pastoralism over the exclusive sedentary life attached to agricultural farming because of the unfavourable natural conditions, explains to a large extent the absence of the emergence of a substantial agricultural surplus capable of initiating the beginning of a social differentiation that unavoidably accompanies the development of any social division of labour. The agro-pastoral mode of production that characterised pre-colonial Algeria was therefore marked by the seal of autarchy and stagnation (15). The domination of an essentially rural activity highlighted in turn the absence of a significant division of labour between town and country (6). The social reproduction that prevailed was what alone guaranteed the balance between production and consumption (17). The characterisation of such a society also produced its own forms of power. The poverty of agricultural surplus generated within such a tribal formation was not able in particular to sustain a form of state in its modern sense, i.e. a state consolidated through the deepening of the social division of labour whose reproduction is intertwined with that of society. Instead, and as a result of the absence of the realisation of the development of the major social division of labour, the unchangeableness of the archaic mode of production that characterised the agro-pastoral pre-colonial Algeria contrasted a great deal with the "never-ceasing change of dynasty" (18), a characteristic of the fragility of the central power. In the historical context of that time, i.e. up to the 12th century, dynasties drew most of their power not so much from the insufficient domestic agricultural surplus but from the control over resources of external origin: the flourishing gold trade originating from the Eastern and Asian regions and passing through North Africa. Their power fluctuated with the importance of such a trade. The decline of the trade network benefitting

Medieval Europe marked another round of political crisis and a collapse of the central power of the Maghreb and that of their affiliated flourishing towns. After such a trade decline only the *course*, the sea piracy, during the 16th and 17th century continued to provide for the indispensable external resources for the constitution of new dynasties. Throughout both historical phases (the phase of expansion of Eastern trade and the role played by the *course*), the correlation between the doing and undoing of dynasties and that of the fluctuation of external resources constantly confirmed the weak agrarian basis of the central power and the never-ceasing change in dynasties. The independence of the central power from the general characteristic pertaining to the organisation of the social labour process proper to the agro-pastoral mode of production found its ultimate confirmation within the first days of the French conquest of Algeria. Indeed while the power of the Dey (the representative of central power) collapsed within the very first days of the French penetration, on the contrary the control and "pacification" of the tribes was such that, as a result of fierce resistance, it took the French several decades and more to achieve their complete subjection and domination (19).

II. The decomposition of the traditional society and the emergence of the colonial economy.

The colonisation of Algeria (see Appendix A1.1 for map of the country) was in essence an economic colonisation, an appropriation of all its social forms of resources and wealth: land, water, forest, minerals etc (this is not to say however that it was not also eminently political as the changes brought about, deeply altered Algeria's social and political institutions; by focussing on the economic side of things, one is only bringing to attention the material precondition of such a change). The achievement of such a movement coincided intimately with the progressive formation and consolidation of a capitalist sector, agrarian in nature and ethnically European (particularly French) in terms of settlement. In its genesis the development of capitalism and capitalist relations of production was based on the realisation of the historical

preconditions of capital itself, i.e. the divorce of the producers from their own means of production, which incidentally are also the economic conditions of the production of their means of subsistence. "The capitalist system presupposes the complete separation of the labourers from all property in the means by which they can realise their labour...[for]... the expropriation of the agricultural producer, of the peasant from the soil, is the basis of the whole process" (20). In the context of pre-capitalist Algeria (21), the expropriation of free producers and the destruction of the basis of their social organisation was achieved through two main channels; direct violent measures - particularly during the first phase of colonisation - such as military conquest, land confiscation, juridical means, forceful displacement of the indigenous population, etc. followed by the manifestation of the much subtler economic mechanisms proper.

A. The direct mechanisms of land confiscation.

The study of such mechanisms is of great significance. Through them one follows not only the consolidation of colonial capital accumulation but also assesses the progressive weakening and destruction of the indigenous social formation through the constant alienation of one of the factors upon which the condition of its own reproduction was based: land. Such mechanisms evolved with the parallel consolidation of the colonial military power proper which faced continuous widespread tribal rebellions and uprisings. During the earliest years of the French presence in Algeria, however, at a time when neither a coherent policy of colonisation or a fixed doctrine existed (French colonisation started as a mere military adventure), "all what mattered was to defeat the enemies rather than administer subjects" (22). During the initial phase of conquest the system of peasant economy upon which the socio-economic organisation of pre-colonial Algeria was based could be considered basically unaltered in its reproduction. The immediate effect of colonisation resulted essentially in the confiscation of land belonging to the central power and its dignitaries following the

defeat of the central power. With the constitution of the *bureaux Arabes* in 1844, the policy of systematic confiscation of the tribal land started to take shape (the *bureaux Arabes*, an entirely military institution, was among the first instrument of implementation of the colonial policy for dismantling the land asset of the indigenous population). With the subdivision of the Algerian territory into a civilian zone (i.e. a French zone) and an Arab (Algerian) zone in 1845, the indigenous population directly fell under the ruling of military law, i.e. martial law (23). The rule of economic and political segregation was set on a clear and deliberate distinction whereby "to the French [corresponded] the French law, to the foreigners the international law [and] to the indigenous, the military law" (24). In 1844 the land belonging to the tribes which opposed early resistance to French colonisation was confiscated. In 1846 the policy of land confiscation was taken one step further when tribal land was "amputated" with the justification that it was not being farmed. "The non-farming of the land is a sufficient cause of expropriation for the sake of public utility" (25). The loose interpretation of such legal dispositions led to the confiscation of pasture land or simply fallow land. Such measures affected most of the agro-pastoral tribes (i.e. most tribes) which required large territorial areas for their extensive livestock activities, as well as those involved in cereal farming based on biennial rotation combining cereals and fallow land. "Land confiscation based on property title verification (that is individual property rights) in a country where landownership was collective, enabled a further systematic expropriation of peasant-farmers". In the region of Algiers alone, out of the recorded 168,000 ha, 78% were appropriated by the State to be distributed to European colonists. The share which accrued to the indigenous population was only 11,500 ha (26).

While awaiting the consolidation and generalisation of the French Napoleon legal system codifying private property rights (achieved through two famous laws in 1863 and 1873), the widest operations of land confiscation remained the policy of *regrouping* or *tightening* of the tribes on administratively fixed territories upon

which the rights of the tribes were then formally recognised. "Thus the tribes were declared simple possessors of the land and in return for an amputation of their rights, received a property right on the land that the state wants them to have" (27). Based on the "assumption" that the tribes owned a disproportionate amount of land, this policy succeeded in expelling them *de facto* from their ancestral land. "The regrouping ended up by leaving to the Algerian a portion of the land, variable, according to the regions, the humour of the French civil servant or the power of the colonists, which they could farm or fructify at will. France brought to Africa an inalienable and revolutionary value: the concept of private property, which allowed to give a good conscience to Paris and better profit to the colonists" (28). The colonial attack on the tribal land was aimed in the last analysis at the dismantling of the collective ownership of the land and its transformation into an individual ownership open to circulation through sale. The realisation of the objective of private property rights was achieved through two complementary laws: the *Senatus Consult* law of 1863 and the *Warnier law* of 1873. The terms of the *Senatus Consult* were the consolidation of the property rights of the tribes (over a land on which a limitation was already introduced following the policy of regrouping). On the land not yet limited by previous regrouping operations, the policy of "consolidation" achieved the same result: a reduction of the land asset of the indigenous community as a result of an authoritarian geographical distribution of the tribes. Outside the delimitation of a communal land, the remaining land became State land, i.e. a land accessible to colonisation. In the aftermath of the *Senatus Consult*, during the years 1863 and 1865, the disruption of the ancestral social organisation of the tribal communities, coupled with bad harvests, was to lead to the worst famine of the time. During this period a minimum of 500,000 people died of hunger. M. Lacheraf, an Algerian historian who wrote about this period noted that "while the grain reserves of the settlers remained intact, not a single move towards mutual help, be it private or official, was organised in favour of the hungry on the part of the alien masters of the country, many of whom rejoiced faced with prospect of an appropriate

extermination" (29).

Seen in perspective, the Senatus Consult law was a preparation for the development and the generalisation of private property. The land restriction of the tribal land brought about by the Senatus Consult did not affect the mode of collective ownership of the land as such, it only restricted the scope of its extension. The aim of such colonial laws, "ignoring" the characteristics of the land ownership of the tribe, based in fact on a private form of ownership but subsumed however under the category of a collective ownership, was to simply convey the fallacy of the existence of the notion of "naked property" in so far as tribal lands were concerned. Karl Marx who had a first hand experience of Algeria at that time gives a clear cut assessment of the form of ownership of land and of its juridical status. "It is Algeria which preserves the most important features - after India - of the archaic [by this Marx means without central power] form of landed property. Tribal and family indivisible property was the most prevalent form of property. Centuries of Arab, Turkish and finally French domination have proved unable - except during the very last period, officially since the 1873 law [i.e. the Warnier law] - to break the organisation based upon blood and the principles which derived from it: the indivisibility and the inalienability of landed property" (30). Based on Muslim law, the dominant feature of ownership of the land remained basically collective. The rationale of this type of ownership was the preservation and protection of the material basis (i.e. land) of the social organisation of the community and of the society itself. This preservation was achieved by the reinforcing power of two powerful binding rules: indivision on the one hand and *chefaa* (see below) on the other. *Indivision* preserves the land from its loss *vis-à-vis* the community. In fact "it is a successoral rule of Muslim law which institutes the durability of the real asset in the case of bereavement of a property holder" (31). The *Chefaa* rule, by preventing the land to be sold to any person or entity alien to the community completes the protection of the economic survival of the community and guarantees therefore its social reproduction. The Muslim law is therefore in essence a law which reinforces the

endo-alienation of the land while it erects coercive barriers against its exo-alienation. The Warnier law of 1873, a colonist inspired law *par excellence*, was precisely directed against these two legal pillars (Chefaa and indivision) which so far prevented the tribal land from the insatiable needs of a host of speculators and usurers. It substituted the Muslim legal system with the French Napoleon legal code. The legal dispositions governing the tribal land ownership were "frenchified", i.e. governed by the rules of private ownership. In its first article the Warnier law leaves no doubt about its aim: "The institution of real estates property in Algeria ... is governed by the French law. As a consequence, all real rights .. based on Muslim law ... which would be contrary to the French law are abolished" (32). Property titles were issued to individual members of the community but not all members were issued with them. All those eligible parties, theoretically entitled to a property right, were simply dismissed from the distribution of such titles when their land share was considered insignificant or when the Muslim inheritance mechanisms were too complex to be sorted out. The "simplification" which accompanied the execution of the Warnier law produced overnight the first modern generation of landless peasants (33). In effect the institutionalisation of private property was only the prelude to the definitive collapse of the social structures of the peasant economy as a result of the shrinking of the land base through the pauperisation of its owners. "By putting an end .. to the indivision of the land, the legislative power geared its attacks to the ancient labour process and to the conditions of its reproduction: each Fellah (peasant farmer) must face all constraints without external support. Collective grains reserves disappeared and the small peasant was henceforth subject to climatic hazards and at the same time exposed to usury and expropriation" (34). The transformation of the land into a commodity, achieved at the same time the condition of its circulation and eventually that of its corollary: the separation of direct producers from their material means of subsistence: land. The implication of such a transformation is however much deeper. The transformation of the social status of land, one of the main components necessary

to social production, meant in fact the destruction of that society itself. As K. Marx put it "through the individualisation of the landed property one achieves the political objective at the same time: to destroy the very basis of this society" (35).

B. The economic mechanisms of expropriations.

Conversely to the generalisation of private property, the destruction and domination of the peasant economy was speeded through its integration in the sphere of commodity relations. But it is worth mentioning that such subsumption did not proceed smoothly on its own. The means which operated such an integration was achieved by the development of the colonial tax system which also proved most efficient in the extraction of an economic surplus from the peasantry . From 1845 onwards the payment of taxes in kind was suppressed and replaced by a payment in cash. This obligation forced the peasant producers to valorise their production through commodity exchange, thus disrupting the traditional mechanisms of exchange and distribution of the social product. The new terms under which the peasants were to pay their tax dues were also accompanied by an increased taxation. The Algerian peasantry was subject to a different tax system over and above that to which were also subjected the European settlers. From the standpoint of both systems a discriminatory treatment of the peasantry prevailed. The peasant tax system was openly discriminatory in that it openly excluded the colonists from the same treatment. If the common tax system appeared fairer because it was based on homogeneous rates for both Europeans and Algerians, the distribution of such rates revealed that the highest rates of indirect taxation concerned mainly those goods most consumed by Algerians. The following table gives evidence of this point.

Table I.1: Consumption tax differentiation between Algerians and French.

Products most consumed by Algerians	Taxes	Specifically European products	Taxes
Sugar	Fr 5	-	-
-	-	Cheese	Fr 3.00
-	-	Lard	Fr 3.00
-	-	Pork	Fr 6.00
Tea	Fr 25	-	-
Green paper	Fr 20	-	-
Candles	Fr 10	-	-
-	-	Wine	Fr 0.32

Source: Henni, Ahmed. "La colonisation agraire et le sous-développement en Algérie". SNED. Algiers. 1981. p. 103.

The contribution to which the peasantry was put in raising the public finances of the colonists appears much more clearly when one looks closely at the indigenous tax system proper. In its structure the indigenous tax system includes many items, the most important of all being that termed the *Arab taxes*. Arab taxes were direct taxes ventilated between 4 main posts: the *Achour*, the *Hokor*, the *Zakat* and the *Lezma* taxes. The first three were direct agricultural taxes by definition. The Achour and Hokor taxes were levied on farmers on the basis of the size of their land holding. The distinction between these two taxes depended mainly on the juridical status of land. The Achour was levied on a supposedly private land. It represented about Fr 15/ha, or the equivalent of 105 kg of wheat + 80 kg of barley/year/10 ha of land. In 1958 this rate was increased to Fr 25/plough (the plough representing here the theoretical measure of 10 ha of land). The hokor tax was levied on the tribal land (arch land) as well as on the state "rented" land to the tribes (Azal land). Initially fixed at Fr 25/plough/year this tax was increased in 1885 to Fr 30. The zakat tax was specifically a tax on the size of livestock.

According to Henni Ahmed the weight of these taxes was such that "80% of the [poor] peasantry had to draw in its physiological minimum to meet [their payment]" (36). At the difference of these taxes - which were by definition a tax on capital - the lazma tax was a tax on persons and households (its rates varied from Fr 20 to Fr 22.5 for the

former to between Fr 5 & Fr 15 for the latter depending on the level of income). The result of such a discriminatory tax system was such that, in 1909 the 2.5 million ha farmed by Algerians allowed the treasury to raise Fr 17 million, while the one million ha cultivated by Europeans farmer raised nil" (37). An increasing fraction of the "Arab tax system went also directly to those colonist controlled European local collectivities: 10% in 1845, 30% in 1852, 40% in 1859, 50% in 1861, 60% in 1868 and 50% in 1873.

The channeling of resources from the peasantry to the colonists was further increased by the introduction of complementary indigenous taxes. The system of *Additional Centimes* supplemented the previous taxes by devising means to increase the resources at the disposal of the colonists. With this system and for each Fr 1 of Arab tax paid, the population was to pay in the form of additional centimes x number of centimes. The system of *Extraordinary Centimes* was another juridical device, a sort of a tax rate to the third degree. The aim of the system was officially justified in order to "finance the operations of consolidation of the [colonial] landed property" (38). These two taxes levied Fr 3.5 million in 1891 or the equivalent of 22% of Arab taxes during the same year (Fr 15.9 million). *Indirect Arab Taxes* included a wide range of rates: taxes on scattered rural dwelling, on indigenous market places, on sweeping (in order "to finance the cleanliness of the colonist-villages" (39), on dogs (a tax without any similarity for the European settlers), on animal slaughtering, on rented accommodation, on consumer goods (see above), etc. Tax services, i.e. *labour* rent and *animal* rent: this special form of levy, feudal in nature, binds both the peasant and his animals (horse, mule, donkey, cattle) to provide yearly, 3 days of free work for the colonial administration. A fourth day of compulsory free work was also imposed on the peasantry for the prevention of fires and/or improvement of rural roads. When this category of taxation is taken into account the extraction of the peasant surplus labour was thus operated this time under the form of the free use of labour power. *The indigenous code* was a codified list of fines based on vaguely determined offenses - up

to 41 - such as "mistakes", "breeches", "acts of hostility", etc. to which the Algerian population was subject . *War fines* were applied as a punishment to the rebellious peasantry. Between 1830-1865 Fr 58 million were levied through this channel and during the period 1870-1900 Fr 35 million (the 1871 uprising alone led to the confiscation of 446,000 ha and a fine of gold Fr 11 million).

Between the indigenous and the fines the colonists raised resources equivalent to 65% of their total expenditure (Fr 173 million) between 1830-1900. The following structure of the budgetary resources summarises the pre-eminence of the contribution of the peasantry to the colonial budgetary resources.

Table I.2: State budgetary resources (distribution of taxes): 1901-1915 (U: Fr millions).

Tax specification	Amount
Arab tax and additional centimes	42.6
Indirect tax on consumer goods	78.9
Tax on mortgageS	24.0
Tax on tobacco an beverages	36.9
Housing tax	10.3
Patent	10.1
Stamps	21.8
Fines	03.5
Income tax	01.0
Tax on mines	00.3

Source: Ibid. P. 104.

As the Algerian population was about 8 times that of the settlers, the above tax structure shows that "the quasi totality of taxes came from the productive effort of the peasantry, from its acquisition of consumer goods, taxes on housing and dwellings as well as from the proceeds of fines which alone brought in to the treasury more than the proceeds of the companies which exploited the mines of iron ore, phosphates, etc" (40).

How do Algerians benefit from such a heavy tax system? The following figures help reveal the extent of the imbalance between their contribution and their benefit. During the same period (1901-1905) the proportion of expenditure (Fr 9.7 million) catering specifically for the Algerians (muslim cult, court, education, etc.) barely

represented 4% of budgetary taxes. For a demographic ratio of 1 to 8 in favour of the Algerian population, and for the same per capita of posts as above, the Europeans obtained Fr 57.2 million or over 6 times more than the Algerian population altogether. From what follows it clearly appears that the function of the colonial tax system was mainly based on the maximum drain of the economic surplus generated by the peasantry in favour of the colonial power and the colonists. As expected such an appropriation and control of the economic surplus opened the way to a process of pauperisation of the indigenous peasants. On the basis of the combined effects of intense expropriations, the extension of monetisation of the economy and the destruction of all social mechanisms of preservation of the peasant economy such as Chefaa and indivision, the peasants had to resort more and more systematically to the local usurious money lenders for a loan by mortgaging their plot of land. The inability of those to pay back resulted in their expropriation. The usury mechanisms of expropriation can in fact produce high returns in terms of the land acquired. Thus when a peasant mortgaging his land could not pay back the loan, the usurer, particularly when dealing with indivision, could ask to buy the entire family land or put to auction the mortgaged land. The latter procedure being costly (recorded procedural costs per ha exceeded the price of the ha), made the entire co-owners of indivision incapable of meeting such costs. Such practices enabled land speculators and usurers alike to acquire land at insignificant prices. The case of entire tribes dispossessed in this manner was not uncommon at that time. Those peasants in debt who were unable to meet the payment of their taxes and/or fines resorted to the sale of their holding when they did not already lose it through the practice of usury: the mechanisms of expropriation developed without limit (41). The number of operations concerning land seizures and sales by auction increased in intensity. By the turn of the 20th Century such operations were counted by the thousands.

Table I.3: Volume of land transfers in favour of colonists.

Number of transfers	Period of transfers
646	1870-1874
709	1875-1879
1,165	1880-1884
2,096	1885-1889
1,987	1890-1894.

Source: X. Yacono "La colonisation dans les plaines du Chélif" quoted by A. Benâchenhou. "Formation du sous-développement en Algérie". Algiers. 1978. P. 70.

The actual areas covered by such operations being not known, the number of operations serves as a fairly good indicator of the intensity of expropriation of the peasantry. Up to 1898 the sale of real estates from Algerians to Europeans was well over 600,000 ha while that acquired by Algerians was only 160,000 ha.

The conjunction of the military, juridical and economic mechanisms contributed to the destruction of the collective property through the freedom to buy and sell which facilitated its transfers to the colonial sector as well as to a faction of the Algerian landed property. The dissolution of the peasant economic system was pursued parallel to the policy of *official colonisation*, i.e. a colonisation in favour of small European peasant-settlers based on a free distribution of concessions of land. By 1880 an estimated 880,000 ha were acquired in this manner, of which 165,000 ha, obtained through free transactions between Algerians and Europeans (42). The official colonisation of settlement developed around centres of colonisation (a concentration of settlers near their concessions). By the end of the 19th century 264 of such centres were created for a French population of more than 195,000. The characteristics of the colonial agricultural sector during this period were not significantly different from those of the indigenous sector. Cereals were still the dominant crop. Farming technology was limited to the introduction of the iron plough which enabled deep ploughing. This period also witnessed a timid emergence of agricultural credit and basic infrastructure works (railways, roads, etc.) as well as the construction of the

first dams - 8 dams were built by 1880 - (43). If this early colonial period introduced a breach in the social structure of the peasant economy (particularly in its land base), its effects were by far more negative on the indigenous population proper. The pacification of Algeria at all costs coupled with continuous rebellions affected the availability of the labour force. From 1830 to 1876 the Algerian population experienced a negative rate of growth: it dropped from 3 million to 2.4 million persons. The fear of social unrest also led the colonial power to considerably restrict the movement of persons to a point whereby the settlers had to resort to a costly seasonal immigration from France and Spain (44). The actual development of colonial agriculture was made possible only when the complete dismantling of the tribal economic system also resulted in the shrinking of the land base capable of supporting an increased number of pauperised peasants. From 1880 onwards when the Warnier law produced its effects resulting in the unprecedented acceleration of the dismantling of the collective land asset of the tribes, the colonial power could be considered to have provided the colonial agrarian capitalism with all the necessary conditions for its expansion: access to land, the generalisation of the use of money, a segregationist policy in favour of settlers, the availability of free labourers, the existence of a guaranteed outlet for colonial exports (45), a class of capitalist entrepreneurs (farmers, traders, bankers) etc, and favourable terms of access to farm credit etc. During this period of capitalist expansion and until the great depression of the 1930s, the colonial agricultural sector reinforced its land base by 55,000 ha and created or expanded 476 centres of colonisation while the aftermath of the Warnier law enabled *free colonisation* - the acquisition of land through market mechanisms - to increase the size of the sector by well over 1.6 million ha. After one century of colonisation nearly 3 million ha of the best land were taken away from the indigenous population to create the settlers' agricultural sector. An important characteristic that accompanied the constitution of the colonial agricultural sector - particularly when the confiscated land was distributed on a concessional basis - was that the settlers' beneficiaries did

not incur the payment of any rent during the gratis acquisition of the land. As one knows, the price of land is "determined by ground rent" (46), or that "...the purchase price of land ... is merely another way of expressing the capitalization of ground rent." (47).

The creation of the necessary conditions that enabled the appropriation of a sizeable fraction of the tribal land resulted, on the one hand, in the parallel constitution of an important colonial capitalist agricultural sector and, on the other, in a profound alteration in the organisation of the indigenous agriculture. In what follows our aim is to study in detail the organisation of these two agricultures.

III. The development of colonial agrarian capitalism.

The main land mark in the development of the colonisation of Algeria can hardly be dissociated from that of the colonial agricultural sector itself. The size of this sector, in terms of arable land (48), progressed in the following manner: in 1830 there was no land under colonisation scheme; by 1880 the total area land increased to 1.04 million hectares, and by 1962 2.7 million hectares. The most prominent development of colonisation took place between 1880 and 1930. It was during this period that the economic colonisation acquired its main characteristics: the integration of the Algerian economy in the French market through its specialisation in the production of raw materials and agricultural products. The colonisation of Algeria acquired the form of an essentially exclusive agricultural colonisation with vineyard and cereal farming playing the dominant poles of capital accumulation.

A. The wine-growing agriculture.

A fortuitous event transformed the fate of colonists into a structural advantage. In 1875 Phylloxera destroyed large sections of France's vineyards. This crisis was to prove profitable for the colony which took over the French market (before the phylloxeric epidemic the size of the French wine growing sector was 2.4 million ha; in 1890 it fell to 1.8 million ha). In the space of 50 years the size of the colon vineyards

was increased by 10 fold:

Table I.4: The extension of the colonial wine growing sector between 1880 and 1930.

Year	Area
1880	24,000 ha
1885	71,000 ha
1895	122,000 ha
1930	235,000 ha

Source: Ibid., pp. 116-134.

Yields and production also increased during this period. Between 1919 and 1930 production doubled, increasing from 6 million hectolitres (hl) to 13 million hl, corresponding respectively to a yield of 36 and 54 hl/ha. The existence of guaranteed outlets on the French market and the financial returns per ha - the net financial return per ha in the viticulture was up to 8 and 9 times that procured by cereals - favoured the development of the overall conditions conducive to increased productive investment: the development of financial capital, discount centres (2 in 1878, 24 in 1891), farm credit institutions (in 1880 the '*Credit Foncier & Agricole de l'Algérie*' and the '*Credit Lyonnais*' were created), cooperative credit institutions ('*Crédit Agricole Mutuel*'), etc. On the labour market side, the expansion of the productive capital in the wine-growing activity also enjoyed favourable terms of access. As a result of this dismantling of the peasant economy, the use of the indigenous labour force tended also to emerge as a systematic phenomenon. During the early years of the crisis of French vineyards, the European settlers relied essentially on a seasonal European labour force (mainly made of French peasants ruined by the phylloxeric crisis) paid at a higher level of wages than the indigenous population. At that time the use of the indigenous population was strictly confined to those activities requiring no particular skill and performed on a seasonal basis. With the progressive recovery of French vineyards and the instability of the market outlet the French and Algerian viticultures catered for the same French market with the result that any superimposition of two good harvests created a crisis of overproduction (49),

concerns for a reduction in costs of production led to a reduction in wage rates and thus to "the rapid elimination of European workers and their replacement by indigenous workers" (50). Progressively the indigenous labour force gained access to more qualified jobs such as trimming, maintenance, graft, etc. but the bulk of the tasks was still performed on a seasonal basis. The availability of an abundant indigenous labour force tapped at will, as a result of its increased pauperisation, offered the ideal conditions for its own cheap employment combining low wages, long period of work and the absence of any social law of protection (51). The search for a wage activity, a direct consequence of the destruction of the peasant economy, was becoming a widespread practice. The main conclusion of a manpower survey conducted in 1934 stated: "We can say in all these regions [i.e. the main indigenous population centres] the search for an outside job has become part of the way of life...Earnings outside their villages appear so necessary to the great majority of the indigenous peasants of Algeria that one wonders how they did manage without it in the past" (52). As intensive an activity as it may appear, vineyard work did not require a year-through workforce. The intensive labour requirement only coincided with peak periods of harvest and trimming, while maintenance and conservation corresponded to very low employment opportunities (the autumn period corresponds to a slack period *par excellence*). The availability of an important labour force enabled therefore the colonial agriculture to use at remunerative terms whatever necessary quantum of labour was required (in 1957 the proportion of total agricultural wages paid by the colonial agricultural sector in relation to the value of the gross agricultural output was estimated (53) at a mere 17%). Indirectly, this systematic irregular use of the labour force evidences the contribution of the "traditional" sector to the development of colonial agriculture: the availability of the supply of an important labour force on the one hand and the remuneration and reproduction of this labour force at times of unemployment due to the erratic needs of the colonial capitalist sector on the other.

B. The colonial cereal agriculture.

In terms of foreign earnings contributions, cereal farming was the second major sector of capital accumulation, but in terms of size, cereals occupied the majority of colonial land. Land devoted to cereals (excluding fallow land) evolved as follows:

Table I.5: Land area under cereal cultivation (ha) excluding fallow land between 1872 and 1928.

1872	1880	1918	1925	1928
158,000	232,000	721,000	882,000	803,000

Source: Ibid., p. 86 & p. 137.

The availability of land offered from the start an opportunity for cereal farming. In its early stage, i.e. before the consolidation of the colonial agricultural sector proper, the organisation of colonial cereal farming gave poorer results compared to the indigenous agriculture for "not owning livestock herds, most colonists resorted to the practice of primitive rotation alternating cereals with fallow land" (54). With the development of credit facilities and fertilizers consumption, the extension of this sector, using the methods of dry farming, was greatly enhanced by its intensive mechanisation (55).

Table I.6: The mechanisation of the colonial cereal agriculture in 1900-1930 (unit=number).

	1901	1915	1930
Seeders	133	905	NA
Reapers	424	1,559	NA
Harvesters	981	3,459	NA
French ploughs (i.e. iron ploughs)	N.A	81,522	257,000
Arab ploughs	N.A	8,439	NA

Source: S. Bedrani "Les Politiques Agraires en Algérie". CREA Algiers. p. 22.

But the development of cereal agriculture remained stimulated more by protective prices and a range of bonuses rather than by exceptionally high yields as shown below (56).

Table I.7: Yields trend in the colonial cereal farming in 1909-1929 (quintal/ha).

1909/13	1918/20	1921/23	1924/26	1927/29
9.7	7.3	5.2	7.4	9.7

Source: A. Benachenhou, O p. Cit., p. 262.

The reasons for such low yields were bound up with the farming practices in use. The practice of biennial rotation combining cereals and fallow land was not given up by the settlers. The multiplication of ploughing practices in order to eliminate weeds and increase the softness and humidity of the soil suppressed the possibility of livestock activity and weakened the fertility of the topsoil through water and wind erosion without any substantial compensatory increase in the use of fertilizers (57). If cereal agriculture had the attributes of a modern agriculture, in so far as its mechanisation was concerned, it however lacked intensification. Intensive farming was mainly restricted to industrial crops, fruit trees and market-garden products. But this sector was not however a dominant pole of capital accumulation if compared to cereals and wine-growing farming which in 1934 made up 80% of the settlers' income.

C. The consolidated land structure of the colonial agriculture. (58)

By the 1950s the definitive characteristics of the colonial agricultural sector were well established: the size of the sector had reached its definitive size, land concentration had produced its results and the specialisation of the land was already structurally consolidated. The colonial sector extended over 2.7 million ha (27% of the total agricultural land) distributed between 22,000 farms (3% of the total farms). On average each colonial farm represented 124 ha against only 11 ha for the "traditional" sector. The real structure of the colonial sector however revealed a different picture.

a. The land structure.

Within the colonial sector land distribution has tended towards a constant concentration producing a picture quite different from that upon which the ideology of official colonisation was based.

Table 1.8: Structure of land distribution in the colonial sector * (1950).

	Number of farms	%	Size of farms (ha)	%
Smaller than 10 ha	7,432	34%	22,585	0.8%
10-50 ha	5,585	25%	135,273	5.0%
50-100 ha	2,635	12%	186,881	7.0%
100 ha & over	6,385	29%	2,381,929	87.0%
TOTAL	22,037	100	2,726,666	100

Source: A. Benachenhou, O p. Cit., p. 259.

*In 1930 the number of farms below 10 ha (8,877) covered 2% of the total land of the sector while those between 10 and 50 ha (7,140), those between 50 & 100 ha (8,877) and above 100 ha (5,411) respectively extended over 9%, 15% & 74% of the farmland of the sector (59).

The distribution of the land was extremely unequal. The majority of farmers (60) - 34% - had less than 1% of the land while 87% of the total colonial land was concentrated within the hands of less than one-third of the total farmers (61). The distribution of the land in turn reveals the extent of the dominant capitalist interests: with 1,506,666 ha, cereal land extended over 55% of the total colonial agricultural sector but as much as nearly half of this area was kept as fallow land: 682,034 ha or the equivalent of 83% of the actual cultivated cereal land (824,632 ha). This cereal agriculture was mainly undertaken by large farmers: 90% was located within farms exceeding 100 ha (62). Such a characteristics explains to a large extent the degree of mechanisation of this sector. In 1934 cereal farming provided one third of the income of the colonial agricultural sector. But viticulture was by far the main source from which the settlers derived most of their earnings and profits (50% of incomes on average (63)). The development of this sector extended over 348,500 ha (or 13% of the total European sector) owned by 11,500 farms, 28% of whom controlled 65% of the sector (21% of total viticulturists with holdings less than 10 ha only controlled 2% of the land). The average size of farms tended to be lower than that of the cereal

sector: over 37 ha if one excludes those properties which controlled 2% of the total sector and 30 ha with their inclusion (64), but this lower size was more than compensated for by the much higher cash value of the crop which on average accounted for 50% of the total income derived by the colonial agricultural sector. The weight of large farms in the distribution of income generated by this agriculture was also prevalent for all other forms of farming however subsidiary they may be.

Market-garden farming extended over on an area of 20,600 ha (less than 1% of the sector), distributed between 6,800 farmers, 50% of whom belonged to farms of 50 ha and above. Fruit trees which occupied an area covering 53,000 ha (2% of the total colonial sector) located mainly in the fertile northern belt, provided over 10 million trees (7 million citrus trees representing 88% of the Algerian orchard and 3 million of olive grove). This production involved 5,700 farmers, 32% of whom belonged to the category of larger farmers (100 ha and above) who controlled 67% of the area cultivated. Large estates were also predominant in livestock rearing: 90% (464,000 heads) of the total sheep flock, 62% (35,000 heads) of the total goat flock, 75% (98,000 heads) of the total swine herd, 71% (114,000 heads) of the total bovine herd, 93% of pasturages (320,000 ha), 70% of fodder crops (27,000 ha) and 86% (12,500 ha) of natural meadows belonged to the largest estates. The following table offers the best overall illustration of such a colonial agricultural structure:

Table I.9: Distribution of European crops between the different types of farms (%).

Crops	Small farms <10 ha	Middle farms 10≤X≤100 ha	Large farms ≥ 100 ha	% in total farms	% in total Algeria
Cereals	0.3	9.0	90.7	30.20%	20.9%
Fallow land	2.0	7.3	92.5	25.00%	25.8%
Vines	2.2	32.3	62.5	12.70%	89.8%
Pulses	0.3	9.2	90.5	1.75%	29.2%
Market-garden	20.6	42.2	37.2	0.70%	36.7%
Fruit	5.0	27.8	67.2	11.95%	26.6%
Industrial	1.0	21.0	78.0	0.802	43.0%
<u>LIVESTOCK</u>					
Pasture land	0.3	6.5	93.2	12.6%	19.7%
Fodder	1.9	28.7	69.4	1.46%	70.2%
Perm. nat. meadows	0.6	13.2	86.2	0.50%	52.7%
Sheep	0.6	8.9	90.5	- -	9.5%
Goats	7.8	30.3	61.9	--	1.0%
Cattle	4.2	24.2	71.6	- -	11.3%
Swine	7.4	17.5	75.1	- -	0.0%
<u>FOREST</u>					
Wood, Esperto-grass zone0		3.1	96.9	10.00	56.6%
Unproductive land.	2.2	15.5	82.3	2.00	16.2%
% Of Farm Area	0.83	11.8	87.3	100 %	27%

Source: H. Isnard "Structure de la colonisation agricole en Algérie a la veille de l'insurrection", Méditerranée N° 2-3 Avril-Septembre 1960. P. 19.

From the above table there appears a clear specialisation between the three types farming. Large farms were multicropped with cereals as the main crop. Their activity included work on vineyards, pulses, industrial crops and livestock. Middle farms were characterised by three main crops: vineyards, market-garden products and livestock rearing. Small farms were essentially geared towards market-garden products.

The work of all types of farms included also animal husbandry and fruit tree cultivation. The orientation of production in each case depended on the size of the farm and the type of land which dictated the type of production most compatible with the highest monetary return. This is in fact a major feature of colonial agriculture: the economic activity was essentially a commercial activity geared towards profit maximisation. The choice of a crop was always that which guaranteed the highest monetary returns. In their mode of management each type of farm displayed its own characteristics

b. The modes of farming in the European sector.

European farms were heavily dependent on the use of labour force. In 1950 over 90% of them were directly dependent on it (65). The forms of farm management were based on a variety of labour contract depending on the type of involvement of the landowners in the management of their farms. Nearly half the landowners were absentee landlords who entrusted their land to sharecroppers and/or farmers. The highest rate of landowners directly exploiting their farms was to be found amongst smallholders (78%), as against 65 % of middle farmers and 50% of large landowners. The main forms of labour contracts used by European farms were the wage system and the Khamassat (a specifically indigenous form of sharecropping whereby, in return for the contribution of the landowner in terms of land, seeds and implements, the Khamasse - the sharecropper - farms the land under the provision of 1/5 remuneration on the net farm crop. This system of sharecropping was most prevalent in Eastern Algeria. In the Constantine region over 1/5 of the European land, representing 1/4 of the farm area, was farmed by 7,000 khamess viz. 70% of all khamess, in the European agriculture. Out of the 22,000 farms, over 2,000 resorted to the khamassat system (1,282 farms used the khamassat as the exclusive form of land farming, while 936 of them resorted to it in a partial way for land reclamation purposes). The majority of colonial farms (86%) relied on a combined wage-earning system. While 4,600 of them (1/4) resorted exclusively to a seasonal labour force amounting to over 2 million days work, only 4% of them employed a permanent work-force and the remaining 62% (13,692) relied on a combination of both seasonal and permanent work-forces (66). The overall view of this employment situation is illustrated by the following table.

Table I.10: Employment structure of the European farms in 1950 (U=number).

Category of workers	Number of workers and number of days work
Khamasse	10,138
Permanent wage workers	120,652
Seasonal workers as expressed by the number of days work	21 million days works

Source: H. Isnard, Ibid. p. 97.

Of the khamess, 83% were employed by farms above 50 ha, mostly located on dry land (67). In the category of farms relying exclusively on seasonal employment, we find a great proportion of farms below 50 ha (80%) which used about 1.6 million days work. The great concentration of employment (about 54%), both seasonal and permanent, was to be found mainly in large farms above 50 ha (7,738), compared with 46% in farms below 50 ha (6,643). If one takes into account those farms which employed exclusively a permanent labour force (i.e. 689 farms) only 5% of farms relied on this form of wage system. Though the exact distribution of employment between large and middle farms is not known it however remains significant that such employment concerned a more or less even number of farms but with an extremely uneven distribution (farms above 50 ha covered 94% of the total area of the colonial sector). The concentration of employment is thus mainly on large farms above 50 ha . In themselves the characteristics of employment in colonial agriculture were therefore largely determined by such large farms using both permanent and temporary labour (68). The main characteristic of such an agriculture was its entire dependency on the indigenous rural proletariat "which represented a permanent settlement 5 to 6 times larger than that of the European landowners half of whom absentee and was further reinforced by hundreds of thousands brought in by seasonal migration" (69). In contrast to this highly mechanised sector based on a high land concentration and entirely geared towards the international market (in 1929 79% of wine production, 21% of cereals, 33% of citrus fruits, 49% of potatoes, 70% of pulses, 72% of olive oils, 90% of tobacco, 98% of esperto grass, 86% of cork-tree, 90% of phosphate and 98% of iron ore were exported), we find an indigenous agricultural sector endowed

with different structures and subject to a different form of determinism as far as the orientation and organisation of its production are concerned.

IV. The "traditional" agricultural sector.

In its formation the indigenous agricultural sector directly bears the scars of the genesis of the colonial sector itself. In an historical perspective the formation of the indigenous agricultural sector indeed remains inseparable from that of the colonial sector, with the history of the development of the former the mirror image of the latter. The extension of the colonial sector beyond the Beylical land and that of its dignitaries, has systematically coincided with the expropriation of the indigenous peasantry. In essence the movement of expropriation was a non-stop process involving a steady and progressive displacement of the indigenous population more and more sloppy and marginal land. It was this very phenomenon of expropriation which was to mark the birth of the Algerian proletariat itself. In turn, the development of the rural proletariat was to reflect the constant indicator of land confiscation which accompanied the history of capitalist penetration in the Algerian countryside. It was through the development of colonial agriculture and social differentiation that "traditional" agriculture acquired its main characteristics. Thus the shrinking of its land base, the fragmentation of the land to an extremely uneconomic extent (70), the low fertility of the land (71), the proletarianisation and pauperisation of an increased proportion of the agricultural population, etc. were all the dominant factors which were shaped directly or indirectly by the mode of capital accumulation. As paradoxical as it may appear at first sight, the indigenous agricultural sector extended over 73% of the total agricultural land and controlled 96% of total holdings.

Table I.11: The land holding structure of the Algerian agriculture (1950).

	Colonial agricultural sector		Indigenous agricultural sector		Total
Holdings (number)	22,037	(3 %)	630,731	(96 %)	652,769
Agricultural land (ha)	2,726,666	(27 %)	7,349,166	(73 %)	10,075,832

Source: Ibid. p. 85.

The first contrast between the two agricultures was the considerable difference between the amount of land at the disposal of each category of holding: 124 ha/holding in the European sector against 11 ha in the indigenous sector (on average the size of a settler farm was over 10 times larger than that of an Algerian farm). If one takes into account the fertility differential between the two types of farm, the real economic difference goes well beyond the mere comparison of sizes. One sees therefore how on grounds of natural conditions of production alone, the "average" settler was put in a much more advantageous position (72). The mechanisms at the origin of such an unequal distribution was the economic law which prevailed in the orientation of the colonial agriculture: the orientation of production in accordance with the highest monetary returns, i.e. the search for the land with the highest fertility. It was therefore such an economic law which both directly and indirectly shaped the whole socio-economic panorama of Algeria as well as the sectoral configuration of its agriculture. Compared to the colonial sector the structure of the indigenous sector did not display the same degree of land concentration.

Table I.12: Structure of the indigenous agricultural sector (Number, % & ha).

	Class area	Number of farms		Farm area (ha)	
Small	≤ 1 ha	48,021	(9%)	19,409	(0.3%)
holdings	$1 \leq X \leq 10$ h	307,961	(56%)	1,257,584	(17%)
		} 355,982 (65%)		} 1,277,350 (18%)	
Middle	$10 < X \leq 50$ ha	162,513	(30%)	3,105,409	(43%)
holdings	$50 \leq X \leq 100$ ha	16,433	(3%)	1,084,552	(15%)
		} 178,946 (33%)		} 4,189,961 (59%)	
Large	≥ 100 ha	8,382	(2%)	1,663,892	(23%)
holdings					
Total		543,310		7,131,203	

Source: H. Isnard, "Structure de l'agriculture Musulmane en Algérie à la veille de l'insurrection". Méditerranée N° 2-3 Avril-Septembre 1960. (The above figures are our own calculation on the basis of H. Isnard's article).

In their typology such farms are indicative of the degree of social differentiation operated between the category of poor, middle, and rich peasantry with, however, a predominance of the first category. The highest farm area (59%) was concentrated within the middle farm category representing 1/3 of the total farms (in the colonial sector these middle holdings only controlled 12% of the sector). The largest farms extending over 23% of the land, were concentrated within only 2% of the total indigenous farms. As such this distribution represented the highest land concentration within the sector with farms averaging about 200 ha (in the colonial agricultural sector the average size of a large farm was well over 370 ha). Farm concentration was highest however within the small holding category, with 65% of farms owning less than 10 ha over an area covering 18% of the total sector (73). On the whole these were the two major characteristics of the land structure of the traditional sector: a net predominance of the category of middle farmers (though a high degree of land concentration was achieved in the category of large farms, such a concentration did not secure an overwhelming proportion in the total sector), and a very high concentration of farmers within the smallest holdings for every 10 farmers more than 6 farmers had holdings not exceeding 10 ha of low fertility (74).

We now turn to the question of how did such a land structure relate to its agricultural use ?

A.The agricultural structure of the indigenous sector.

Compared to the colonial sector the indigenous agriculture was essentially a subsistence economy, an economy essentially geared towards simple reproduction. The indigenous agriculture was overwhelmingly based on cereal farming which absorbed 70% of the land. In 1950 over 3 million ha were devoted to cereals (particularly wheat) while 1.9 million ha representing 33% of the land under cereal cultivation, were laid fallow. This mode of subsistence farming was combined with extensive animal husbandry on fallow land and pasture land. Land most compatible with intensive livestock rearing such as fodder crops, permanent meadows, represented less than 1% of the total land (30,000 ha). The main pasture land (1.6 million ha), was reduced to brushwood, forest, shrubs, etc. only enabling an extensive itinerant form of animal husbandry (75). The indigenous population owned 5 million sheeps (90% of the total ovine flock), 3.3 million goats (98% of the total flock) and 0.9 million head of cattle (85% of the total herd). The overwhelming importance of sheep denoted a predominant characteristic of a typically Mediterranean form of subsistence farming. The existence of a large communal pasture land also offered the conditions for the development of pastoral nomadism. On the whole cereal farming and extensive animal husbandry extended over 90% of the indigenous agricultural land (76). The remaining land concerned on average 138,000 ha (2% of the total) of crops such as olive-trees and fruit trees (particularly fig-trees). Market-garden products, mainly for family subsistence purposes, extended over 35,000 ha (less than 1%). Only a small section (1%) of the indigenous agriculture was directly involved in cash crop activities. Tobacco farming was developed on 31,000 ha (particularly in Eastern Algeria) and vineyards on 40,000 ha in Western Algeria. The weight of subsistence farming based on a biennial rotation combining cereals and extensive animal husbandry on fallow land remained therefore an overwhelming characteristic of the indigenous agriculture.

It is however at the level of its mode of farming that such an agriculture better restores its particularisms.

B. The mode of farming in the indigenous sector.

Indigenous farms, particularly those below 10 ha, were mainly family holdings whereby most of the activity was directly performed by family members. Wage-earning prevailed mainly in the category of holdings between 10 and 50 ha where 58% of them relied on seasonal workers (77). The dominant form under which land was being leased was the typically indigenous sharecropping system remuneration at the rate of 1/5. 55% of the farm land between 50 & 100 ha and 64% of the land of large farms above 100 ha were directly farmed by khamassé (80% of all khamasse were located in Eastern Algeria against 30% and 42% respectively in Central and Western Algeria). The importance of khamassat was in itself the expression of the emergence of a rural proletariat. From this perspective the process of expropriation which accompanied the formation of the colonial agricultural sector, also benefited a section of the indigenous landowners (particularly middle and large owners). The importance of khamassat in the indigenous sector was due to the social forces which operated the retention of expropriated peasants as simple sharecroppers (78). The trend in the number of sharecroppers of this nature was a good indicator of both the extent of expropriation prevailing among the rural population and also the consequence of the slow emergence of a capitalist agriculture capable of transforming the expropriated peasants into full-time agricultural worker (the absence of any significant colonial industrialisation also explains the degree of retention of expropriated peasants within the indigenous agricultural sector). By the beginning of the 20th century the existence of an agricultural proletariat (khamess and agricultural workers) was well established and its size even outstripped that of landowners themselves.

Table I.13: Rural proletariat and structure of the agricultural population between 1901 and 1930.

Year	Landowners	Farmers	Khamess	Agricultural workers	Active agr. population	Total agr. population
1901	620,898	37,715	350,715	151,108	1,160,437	3,230,647
1910	530,211	N.A	426,851	207,707	N.A	3,525,768
1914	565,218	40,755	407,050	210,205	1,223,228	3,605,449
1930	616,544	50,771	634,600	428,032	1,730,947	4,419,943

Source: A. Benachenhou, Ibid. p. 236.

From 1910 onwards the number of landless and near landless was already far greater than the number of landowners (by 20% in 1910, 9% in 1914 and 72% in 1930). Between 1914 and 1930 the number of proletarianised peasants had more than doubled. Between these two dates, it respectively represented 43% and 61% of the total active population (79). Compared to the colonial sector, the indigenous agriculture was also under-equipped throughout (the persistence of Khamassat expresses itself in the absence of any major technological alteration in the labour process of indigenous farms).

Table I.14: Comparative degree of mechanisation of the indigenous sector (1930).

	Number of Indigenous farm machinery	As a % of total agr. farm machinery
French plough	88,562	44 %
Local plough	339,650	99 %
Harvesters	3,334	20 %
Mobile engines	120	8 %
Threshers	177	11 %
Self propelled ploughs		
- Above 15 horse power	8	3 %
- Below 15 horse power	269	7 %

Source: Ibid. p. 216.

The extent of the technological backwardness of the indigenous sector cannot however be viewed from the sole standpoint of total farm machinery pool. As a result of the differential size and the specific qualitative characteristics of the two sectors, the extent of the technological gap of the indigenous sector appears in fact much greater than that suggested by the above figure. Far from being a "natural" feature, the limited mechanisation or the lack of a substantial investment capable of multiplying

agricultural labour productivity and therefore of increasing agricultural output, was the result of the colonial policy based on the identification of capital accumulation with the exclusive development of the colonial agricultural sector (the different channels - particularly fiscal - which operated a constant drainage of the indigenous agricultural surplus, are not alien to the technological backwardness of the sector). In the field of agricultural credit which was the main channel of acquisition of modern technology and consolidation of infrastructure, this colonial policy of economic and social segregation contributed for its part to the reproduction of the technological gap of the indigenous agriculture.

C. Agricultural credit and capital accumulation.

The development of agricultural credit emerged as a financial requirement of capital accumulation through an expansion and diversification of agricultural production. The setting up of credit institutions was brought about by financial and banking institutions from both France and Algeria including the Bank of Algeria, the Land and Agricultural Credit of Algeria, the Mutual Agricultural Credit, the Credit Lyonnais etc. The organisation of such institutions was monopolised, through their board of management, at regional and local level, by economically powerful colonists in order to secure their own interests and those of the colonial sector at large. But the inequality of access to credit among settlers themselves was not absent. The following table based on the institution "*les Caisses Agricoles*", which supposedly officially catered for the credit needs of the small settlers clearly shows the degree of differentiation achieved among the colonists.

Table I.15: Structure of loans among Europeans in 1925. (U: Fr).

Individual loans	Number of borrowers	Amount borrowed
Below Fr. 15,000	10,950	32,980,000
15,000 < x < 30,000	890	20,440,000
30,000 < x < 50,000	370	10,920,000
Above 50,000	60	5,130,000
cooperative loans	12,260	8,930,000

Source: G. Dumenil, "La Banque d'Algérie", 1927, p. 153 quoted by A. Benachou Ibid. p. 148.

Out of 12,270 individual borrowers 89% of them (10,950) had access to only 47% of the total individual loans while the smallest fraction (11%) gained access to more than 50% of the total loans. As far as the indigenous agricultural landowners were concerned, let us hear the comment of the one-time governor of Algeria, M. Violette: "For the indigenous population, the situation was much more serious, as many Mutual Credit bodies ignored them, etc. let us say more simply that the indigenous agricultural credit was practically non-existent" (80). In order to fight the widespread forms of usurious credits to which the small indigenous peasants were subject, an indigenous credit institution was created: La *Société Indigène de Prévoyance* (SIP) the Indigenous Provident Society (81). As for the colonial credit institution, the functioning of the S.I.P.s was appropriated by the indigenous landed elite at the expense of the poor peasantry. The conditions of credit distribution were such that "only those who enjoyed financial solvency and social reputation benefited from loans. We arrived at this singular paradox of having established a common fund, financed by all, but allocated to the satisfaction of the needs of the most well-off, while the poor, though bound to membership contribution, were excluded from the advantages of the fund" (82).

Table I.16: Loans granted by the S.I.P between 1900 and 1934 (83).
(U= Fr millions)

Year	Number of members	Total contribution	Loans	Help (grant)
1900	338,000	8.7	NA	NA
1910	540,000	21.0	9	0.004
1920	579,000	41.0	19	0.200
1930	622,000	83.0	37	0.100
1934	604,000	91.0	24	0.300

Source: A. Benachenhou. Ibid. , p. 183 and p. 220.

The exclusion of the small peasants from the scope of the credit allocation of the S.I.P meant that the usurious credit practices to which they were subject, remained unchallenged as were the economic mechanisms of expropriation and pauperisation (the drop in membership level between 1930-1934 tends to suggest that many peasants abandoned the agricultural profession altogether).

On wider scale the unambiguously unequal distribution of the credit funds during the last years of French colonisation (84) clearly speaks for itself.

Table I.17: The agricultural credit distribution in 1954-1960.(U= Fr million).

	The traditional sector	% share of the traditional sector	The colonial sector	% share of the colonial sector
1954	30	22%	107	78%
1955	30	21%	109	79%
1956	20	15%	115	85%
1957	20	16%	107	84%
1958	20	17%	95	83%
1959	30	21%	112	79%
1960	40	22%	139	78%

Source: Ibid. , p. 308.

The amount of credit allocated during this period to the indigenous sector (Fr 190 million), was less than the equivalent credit accruing to the colonial sector during the two year period 1954-1955 (Fr 216 million). Up to the last years of French colonisation, the development of agrarian capitalism remained committed to the exclusive achievements of the colonial sector. As will be seen in the next section, this commitment however was soon to prove self-defeating: the mode of capital

accumulation upon which the colonial policy of "development" was based entered into a period of crisis whose effect was to generate the social forces which were to challenge the very existence of the colonial order itself.

V.The crisis of colonial development: the end of the colonial order.

The crisis of capital accumulation can be traced back to the Great Depression of 1929. The crisis of capital accumulation, in the sense of a stagnation of production or its slow growth was reflected through the study of the two main centres of capital accumulation itself: wine-growing and cereal farming.

The crisis of vineyards between 1930 and 1960 was reflected in the drop of cultivated land (393,000 ha in 1936/40, 350,000 ha in 1956/60), production (18 million hl in 1934/35, 15 million hl in 1956/60), and yields (61 hl/ha in 1928, 50 hl/ha in 1931/35, 43 hl/ha in 1956/60) as well as a stagnation of exports (12 million hl during 1931/35, 1951/55 and 1956/60). Between 1933 and 1935 export earnings of wine growers fell by half as export prices dropped from Fr 190 to Fr 80 thus adding to the already depressed prices during the Great Depression itself. Indebtedness increased among wine growers leading to bankruptcies and further land concentration.

For cereals the overall situation was similar. Between 1930 and 1950 land under cultivation increased only by 2% (from 807,000 ha to 824,000 ha), yields stagnated around 10.8 quintals/ha during 1929/39 and 1957 despite intensive mechanisation (85) - the number of combine harvestors increased from 440 (1930) to 4,650 (1960) and wheel tractors from 5,334 to 23,000 during the same period - and production remained literally stagnant. The effects of the 1929 crisis considerably depressed export prices and the incomes of cereal farmers, thus producing the same sequence of events as in the case of wine-growing: bankruptcies, indebtedness, a drop in the economic growth of the sector, increased land concentration (86) etc.

In the aftermath of the 1929 crisis a policy of stabilisation was triggered by France to

overcome the crisis of capital accumulation. In the wine-growing sector, as a result of the anarchical production of wine which constantly led to the recurrence of overproduction on the French market, new vine plantations were forbidden from 1931 onwards. Such a measure was accompanied by compulsory distillation, withholding of wine production (i.e. the constitution of compulsory stocks) and a guaranteed support price. Similarly, in return for a limitation of production through a prohibition of any extension of the crop land, a fixed price (87) was guaranteed to cereal farmers. The result achieved by such a policy of stabilisation was that, by forcing capital accumulation to accommodate itself with a fixed level of production in physical terms as well as in value terms, it created the conditions for an increased mechanisation, particularly in cereal farming (88). The onset of World War II brought to a standstill the policy of stabilisation, and capital accumulation regressed once more and with it agricultural production. The following table evidences the extent of such a crisis.

Table I.18: Level of production (1939/45).

	1939	During the war	1950
Wheat	12 M qt	2 M qt	10 M qt
Barley	10 M qt	1 M qt	8 M qt
Wine	18 M hl	6 M hl	14 M hl
Sheep (number)	6 M	3 M	4 M

Source: Rapport général du plan de Constantine, p. 15 quoted by A. Benachenhou. Ibid. p. 271.

After World War II, capital accumulation was pursued in accordance with the nature of the measures of economic recovery. In the colonial agricultural sector and the capitalist sector at large (including a fraction of the indigenous economy), the policy of intervention remained identical: generous agricultural credits and increased mechanisation (credit for the acquisition of farm machinery increased from Fr 2,210 million during 1945/47 to Fr 6,033 million during 1950/52).

Table I.19: Mechanisation trend in the colonial agricultural sector after World War II.(1947-60).

	1947	1954	1956	1958	1960
Wheel tractors	NA	11,600	13,650	20,000	20,500
Caterpillar tractors	NA	7,400	8,050	8,600	8,170
Total	5,900	19,000	21,702	28,600	28,670
Combine harvesters	1,200	3,200	4,050	4,500	4,700

Source: G. Duprat "Révolution & autogestion en Algérie". Armand Collin, 1973. pp. 81. Rapport General du Plan de Constantine, p. 15, quoted by A. Benachenhou, Ibid. p. 271.

In the "traditional" agricultural sector, the realisation of the generalised poverty of the indigenous population resulted in the formulation of the first programme of agrarian reform in favour of the Algerian peasants. A specialised body, CAPER (*Caisse d'Accession a la propriété et a l'exploitation Rurale*), a fund for access to property and rural ownership, was created to meet such an objective. The result achieved was however marginal. Between 1944 and 1954 CAPER distributed about 19,000 ha (89) among 1,790 peasants (an average of 10 ha per beneficiary), for an initial target population of 600,000. The colonial promotion of the "traditional" agriculture through farm credit did not depart from the past policy bias. During 1955 the credit section of the S.I.P distributed Fr 2.6 Billion of credit among their 500,000 members. During the same year the credit allocated to the capitalist section of agriculture, with a value of Fr 104.4 Billion (and which concerned 52,000 landowners), represented the equivalent of more than 97% of the credit resources allocated to the traditional sector. The major aspect of the last years of French presence in Algeria was however dominated by the emergence of a new centre of capital accumulation: the exploitation of hydrocarbons (90). But the discovery of this resource coincided as well with the official launching off of the Algerian National War of Liberation in 1954. Though the popular resistance, particularly predominant in the rural areas, never really ceased throughout the history of French colonialism, it was only towards the end of 1954 that the different political parties present (91) regrouped in a united front - the Front de Liberation National (FLN) or the National

Liberation Front - were able to agree on both the means (violence in place of peaceful), and the ends (political independence in place of assimilation and integration) and wage one of the bloodiest wars (92) of political liberation. In a systematic scorched earth policy conducted by the French army, entire rural zones were declared prohibited and cleared away of their occupants, resulting in one of the single most important historical displacement and regrouping of the population. The creation of such military no-go areas also resulted in the elimination of the supportive agricultural and livestock resources for about three million peasants and their families. On a wider scale, level the French military strategy of the physical elimination of the guerillas was always complemented, whenever possible, on a systematic destruction of all forms of resources and means which directly or indirectly served to perpetuate rural warfare. This policy resulted in the destruction of forests serving as a refuge, the elimination of livestock, and the destruction of dwellings, cereals stocks, crops, farm machinery, bridges, and roads, etc. The balance sheet of the social and human cost of the intensified escalation of warfare that led to the defeat of the French government, can be roughly summarised in the following table.

Table I.20: Balance sheet of Algeria at the end of colonisation.

1.5 million dead
3.0 million displaced peasants in concentration camps
400,000 prisoners
500,000 refugees living in Morocco and Tunisia
8,000 destroyed villages
Several thousands orphans and widows
Over two million unemployed
4.5 million poor persons in complete need of basic subsistence

Source: M. L. Benhassine and L. Boukra "Le proces historique de formation du secteur d'état en Algérie (bilan de 20 ans d'experience), *Revue Algérienne des Sciences Juridiques, Economiques et Politiques. Special 20ème Anniversaire*. OPU. Alger. 1981. P. 221. Ian Clegg. *Workers' Self-Management in Algeria*. Allen Lane Penguin Press. 1971. P. 44.

The costly pacification of Algeria which was so necessary for the pursuit of colonial capital accumulation was ultimately defeated in 1962. The official history of colonial Algeria was over but the legacy of capital accumulation after 132 years of colonisation remained. "Algeria has lived its capitalist phase of development during colonisation,

but this capitalism only produced proletarianised classes from peasants reduced to poverty and emigration, to a petty bourgeoisie blocked in all its aspirations towards economic and social promotion" (93).

CONCLUSION: the colonial legacy.

The French presence in Algeria lasted 132 years. Colonial in essence, the history of this presence coincided with the consolidation of capital accumulation on an essentially agrarian basis. The development of this colonial agriculture centered on vineyards and cereals. Both involved a process of farmland extension and concentration. The main characteristics of such a specialisation was its organic link with the French economy. Capitalist in nature this agriculture achieved high profit returns through the use of intensive mechanisation, low wage rates and preferential remunerative prices on the French market (94). But if the colonial agricultural sector was modern in appearance through a permanent increased use of farm machinery, it was however far from being intensive in results. Yields were not significantly high. The biennial rotation alternating cereals with fallow land, a very traditionally, extensive farming practice, characterised colonial cereal farming which can be typified as an essentially extensive modern farming practicing a sort of "mining" agriculture. Based on profit and preferential price advantages with the French metropolis, colonial agriculture specialised also in the much commercially rich cash crops such as vine, citrus fruits, and market-garden products. Originally based on the direct expropriation of the peasants for the constitution of its land base, the development and modernisation of this agricultural capitalist sector generated in turn little impact on employment. In 1954 it was estimated that 25% of agricultural workers worked less than 45 days per year, 50% less than 100 days and 75% less than 290 days (95). In the labour-using sector of wine growing the estimated quantum of labour per hectare fell from 100 days in 1938 to only 56 days in 1959 (96). The major result achieved by this capitalist agriculture which remained throughout its history organically dependent on the French market for the valorisation of its exports and on a generous agricultural credit policy for its expansion, was by far its contribution to the creation of an important proletarianised Algerian population. As such it acted as a powerful factor of social

differentiation. By the turn of the century, there was an estimated 621,000 indigenous landowners against only 373,000 in 1960. Through the long process of land confiscation and constitution of colonial agriculture, the number of landless and near landless swelled, while the generalisation of mechanisation and the type of farming rendered superfluous the economic necessity of a sustained proportion of permanent workers. The increased instability of labour employment which resulted from this form of capital accumulation pushed an increasing proportion of the rural proletariat and the pauperised peasants on a non-stop migratory movement towards urban cities - the proportion of the urban indigenous population increased from 7% of the total urban population in 1886 to 18% in 1954 (97) - and progressively towards permanent emigration proper: in 1948 there were 180,000 emigrants in France as against 300,000 in 1954 and 350,000 in 1962 (98).

The nature of this form of capital accumulation remained agrarian throughout the French presence in Algeria. The consolidation of this sector according to the needs of the colonists was set in an organic relation *vis-à-vis* the needs of the French market: raw materials such as iron ore, tobacco, esparto-grass, phosphate for the French manufacturing industry, and agricultural products for the French food industry in the form of wine, cereals, citrus fruits, industrial crops, olive oil, market-garden products etc. In turn the colony became a market for French exports. Algeria's imports included food products (22% on average during the 1950s), raw materials such as fuels, oils fats (11% of total imports), metal and metal product and machinery (9% on average of the value of manufactured imports) and farm machinery, passenger cars and other transport equipment (20% on average during the same period). The urban economy was mainly based on the import/export activities linked to the trade between the colony and the metropolis as well as on the organisation of the colonist consumer market proper (80% of the urban population was European in 1954). The structure of income distribution between the European population - Fr 360,000 per head on average - and the indigenous population - Fr 29,000 per head (99) - revealed in

turn the correspondence between the structure of imports and the concentration of high incomes thus revealing the extent to which the "relative prosperity of Algeria only benefited a small minority" (100). As an indication of this inequality, in 1955 10% of the total population - one million settlers - controlled about 50% of total income (101).

After 132 years of intensive economic colonisation, and despite the full exercise of free trade between the colony and the metropolis, the characteristics of the Algerian formation were essentially those of an underdeveloped/peripheral economy with the constitution of an economic enclave in the form of a capitalist agricultural sector based on the international valorisation of cash crops and raw materials entirely within the hands of the colonists (102). Such an enclave also meant that the colonial economic exploitation of Algeria had produced little or virtually no structuring effects or integration between its economic sectors (the development of the colonial sector and its expansion depended exclusively on the French market and the French industry at large). The Algerian economy operated *de facto* as an appendix to the French economy. Through this particular form of labour specialisation, all forms of economic growth were transmitted under the form of increased trade between the enclave (103) and the metropolis with imports mutually reinforcing exports. The entire economic integration was operated between an export sector and the French economy. In essence the economy was based on a dominated form of capital accumulation.

The experience of colonial Algeria also showed how the confinement of capitalism within the exclusive sphere of colonial agriculture and its exclusive organic dependence on French capital, explains to a large extent the absence of any significant industrial capital accumulation (104). The emergence of an important proletariat remained therefore without the production of the economic conditions necessary for its employment, and this even when emigration is taken into account. What however further magnified the extent of the pauperisation of the indigenous population, beside that expressed by the pattern of overall income distribution, inequality and the

absence of any industrial indigenous proletariat, was by no means the extent of deterioration and destruction of subsistence farming itself. Under the influence of vineyards and cash crop expansion, food crops deteriorated and cereal farming was progressively pushed back on the less fertile land. The regression of traditional farming based on cereals and complemented with animal husbandry - the expression of peasant simple commodity production - took many forms and followed the initial rupture between the tribe and its ancestral land (this rupture was particularly evident when the land at the disposal of the tribes was systematically reduced and/or when entire tribes were by order of authority displaced). It developed through the resulting pressure produced by an increased population on limited land of poor quality. The old traditional farming methods which combined cereals and animal husbandry on fallow land could not be reproduced. The proportion of cereals tended to increase more and more at the expense of the reproductive capacity of the land. The reduction of fallow land and with it the reduction of animal husbandry and its lost fertilising property through manure, weakened the reproductive capacity of the land (105). The pressure on land was particularly high in the category of small holdings below 10 ha (106). The largest regression of subsistence farming was however carried out after 1954 with the policy of the last massive colonial population displacement. Unlike the earlier policies of regrouping (before and particularly after the Senatus Consult of 1863), which severely restricted the land asset of the tribal population, the 1954 policy of regrouping forced 1/4 of the indigenous population, or about 1 out of 3 peasants (107), out the land altogether. In an attempt to cut off the National Liberation Army (the military organ of the popular rebellion) from its backbone, the peasantry, about three million peasants and their families were driven by force from their villages to regrouping centres, a form of collective concentration camp, transforming the evacuated land into no-go areas for 8 years. The worst hit regions were particularly those where most of the poor subsistence farming was located, the land where the guerillas were operating: the mountainous and forest zones as well as the

surrounding areas. This movement of displacement disconnected about three million people from their traditional resources (small animal husbandry on forest and pasture land, small cereal farming, a few fruit trees etc.). But the loss of such resources was without any compensation as the already populated zones (villages, valleys, piemonts etc.), which received the displaced population, could not materially offer any. In other words this movement of "de-ruralisation" led to a complete proletarianisation of the displaced. "In the zones of colonisation, the policy of regrouping has transformed seasonal workers, who combined traditional farming with alternative periods of seasonal work, into permanent agricultural workers but it has also, it is amply evident, created reservoirs of labourers through the regrouping of old, new and future workers" (108). The loss of the land (109) without any alternative policy of employment transformed the displaced into refugees in their own country. The means of subsistence of the displaced population were mainly based on contingent work, assistance and particularly the money orders from dependent emigrants (110). The proletarianisation of an increasing proportion of the population was therefore being developed on a contradictory basis: the regression of subsistence farming - and therefore the disruption of the balance between the food needs of the population and the material mode of organisation for their satisfaction - on the one hand, and the development of export crops (a mode of organisation of production corresponding to needs different from those of the proletarianised peasants) on the other. The proletarianisation of peasants was therefore accompanied by their inability to produce their own needs either directly as independent producers or indirectly as wage earners (paradoxically it was also peasant economy which *de facto* continued to provide for the food condition of labour power reproduction). The triggering off of such a contradiction and its preservation and development on an ever increasing scale over more than a century, ultimately resulted in the challenge and destruction of its colonial premise. The defeat and elimination of the colonial order created however an unparalleled precedent in the history of colonialism. The political independence of the colony was

accompanied by the exodus of all its settlers. This vacuum, which heralded radically new perspectives for the contending domestic classes, also highlighted the sense of a different and more subtle legacy, that of the colonial economic system itself: "the coloniser contented himself taking in his luggage only appearances, discreetly leaving behind the essentials: his commodity economic laws" (111). The redefinition of the power bearers that accompanied the political independence of Algeria has far reaching implications. Broadly speaking it raises the fundamental question of how the removal of the colonial state redefines the entire strategy of the different domestic groups. At a more specific level, the transition to a politically independent Algeria raises two main issues: How will the new policy of capital accumulation be pursued and in whose interests? and how will such a new strategy of development affect the question and status of a land which dominated the entire capitalist phase of colonial Algeria? The questions are dealt with consecutively in Part II and Part III.

Notes

- 1- G. Djurfeldt Rural Development J. Harriss ed. Hutchinson University Library. 1982. p. 146.
- 2- D. Goodman & M. Redclift From peasant to proletarian. Oxford Basil Blackwell. 1981. p. 9.
- 3- J. Banaji Summary of selected Parts of Kautsky's the Agrarian Question. Economy & Society. Volume 5. 1976. p. 32.
- 4- T. J. Byres The Agrarian Transition and the Agrarian question. The Journal of Peasant Studies. Volume 4. N°3. April 1977. Review Article. p. 258.
But as pointed out by C. Key "the capacity of the industrial sector to create its own surplus for capital accumulation is particularly overlooked by Byres.." *Book Review*. The Journal of Peasant Economy. Volume 4. N°2. January 1977. p. 242. For a critical assessment of T. J. Byres see also S. Corbrige "Urban bias, rural bias, and industrialisation: an appraisal of the work of Michael Lipton and Terry Byres". Rural development. J. Harriss ed. Hutchinson University Library. 1986: 94-116.
- 5- J. Banaji op. cit. p. 3.
- 6- J. Banaji op. cit. p. 7.
- 7- J. Banaji op., cit. p. 24.
- 8- C. Nwoke Third World Minerals and Global Pricing: a new theory Footnote N°13. Zed Books Ltd. London & New Jersey. 1987. p. 11.
- 9- H. Bernstein Notes on Capital and Peasantry RAPE N°10. September-December 1977. p. 67.
- 10- Clegg, Ian. Workers' Self-Management in Algeria. Allen Lane The Penguin Press. 1971. P. 23.
- 11- In pre-colonial Algeria the proportion of the population living in urban areas was estimated to be representing less than 10% of the total population. See Noushi, A. Sur le féodalisme in Cahiers du CERM. Editions Sociales, 1974, p. 182. Quoted by Addi, Lahouari. De d'Algérie pre-coloniale à l'Algérie coloniale. ENAL. Alger. 1985. P. 18.

12-Addi, Lahouari. Op. Cit., p. 28.

13-Op. Cit., p. 37.

14-Les passages de l'antiquité au féodalisme. F. Maspéro, 1977. pp. 240-241 quoted by Addi, Lahouari. Op. Cit., p. 39.

15-Far from being equated with backwardness, the nomadic tribal organisation of pre-colonial Algeria (and by extension the Maghreb countries as a whole), was both the answer to an unfavourable natural environment at the same time as the outcome of a social organisation whose conditions of reproduction remained regulated by the pre-eminence of natural factors: the climate and the prevalence of a semi-desert land.

16-The significance of a deep division of labour capable of substantially increasing the command of man over nature, i.e. a division of labour capable of triggering a cumulative process of development of the productive forces at the disposal of a given society, depends in the last analysis on the realisation of the first major social division of labour: that between town and country. "The foundation of every division of labour that is well developed, and brought about by the exchange of commodities, is the separation of between town and country. It may be said that the whole economic history of society is summed up in the movement of this antithesis" K. Marx. Capital. Volume One. ^WLaurence & Wishart. London. 1974. p. 133.

17-"The balance of the original society [i.e. of pre-colonial Algeria] was a balance between consumption and production" Addi, Lahouari. Op. Cit. P. 62.

18-Marx, Karl. Capital. Volume One. P. 338.

Though Marx comment was on the the Asian mode of production, one cannot avoid finding striking similarities and parallels with the history of the Maghreb dynasties.

19-Commenting along the same line of thought Addi, Lahouari writes "The apparatus of the Dey of Algiers fell like a ripe fruit for it was neither the incarnation of the whole tribes nor even that of the Makhzen tribes". Ibid. p. 32.

20-Marx, Karl. Capital. Volume one, ^WLaurence & Wishart, London, 1974, pp. 668-669.

This expropriation achieves in turn the transformation of means of production and the means of subsistence into capital and the direct producers into wage-labourers.

21-for an assessment of this historical period see in particular R. Gallissot *Economy and Society* as well as some of K. Marx writings on the same issue.

22- Girautin, A. Principes de colonisation. pp. 87-88 quoted by C. Benakezouh, La déconcentration en Algérie . O.P.U. Algiers. 1984. P. 12.

23 -In 1870 the civilian regime was substituted by the military regime. The reason was only too obvious: to facilitate free transactions on the tribal land. The population nonetheless remained still as before subject to the sovereign power of the "Bureaux Arabes".

24-Benakezouh, C. Ibid. p. 7.

25 -Disposition of the Ordinance of 1846. Quoted by A. Benachenhou Formation du sous-développement en Algérie. Algiers 1978, p. 49.

26-Ageron, Ch. L'histoire de l'Algérie contemporaine Paris. P.U.F 1974. P. 23 quoted by Benakezouh, C. Ibid. p. 12.

27-A. Benachenhou Ibid. P. 50.

28-Vatin, J. C. L'Algérie politique, histoire et société Paris. A. Colin. 1974, p. 124, quoted by Benakezouh, C. , ibid. P. 13.

29-Lacheraf, M. Algérie, Nation et Société. Paris Maspéro 1965. PP 18/19, quoted by Benakezouh, C. Ibid. P. 15. For their part Benhassine, M. L. and Boukra, L. note: "Between 1830 and 1954 Algeria experienced a series of dark periods where famine was frequent (1866-68, 1893, 1920-21. etc.), each time resulting in hundred thousands of Algerian victims (for instance for the period 1866 and 1868 alone 500,000 Algerians perished as a result of famine)". La question alimentaire en Algérie: L'affaire des forces productives. AFRIC-ECO N° 3. Février 1986. P. 25

30-Marx, Karl. Sur les sociétés pre-capitalistes, CERM, Editions Sociales, 1973, p. 384. Quoted by G. Montchaussé Steppe Algérienne: causes et effets d'une desertisation. Peuples Méditerranéens. Volume 1. 1977. P. 129.

31-A. Benachenhou Ibid. p. 29.

32-First article of the Warnier law. Quoted by A. Benachenhou Ibid. p. 55.

33-Ibid. p. 58.

34-Ibid. p. 58.

35-Quoted by Amour, K. Leucate, C. and Moulin, J. La voie Algérienne. F. Maspéro. 1974. P. 56.

36-Henni, Ahmed. La colonisation agraire et le sous-développement en Algérie. SNED. Alger. 1982, p. 99.

37-Ibid.

38- Ibid. p. 101.

39- Ibid. p. 102.

40- Ibid. p. 104 (see in particular Appendix A1.2 for more details)

41-Due to the monetisation of the economy and the destruction of all social mechanisms such as indivision, mutual help, a grain reserve to cushion off the effects of a bad harvest etc., the peasant had to resort more and more systematically to the local usurers and money lenders. The inability of those to pay back resulted in their expropriation. The usury mechanisms of expropriation produced high returns in terms of land acquired. Thus when a peasant who mortgaged his land was not in a position to pay back the loan, the usurer - particularly when dealing with indivision - usually asks to be paid out of the entire family land or put to auction the mortgaged land. The latter procedure being costly (recorded procedural costs per ha exceeded the price of the ha) put the entire co-owners of indivision into the financial incapability to meet such costs. Such a practice known under the rahnia procedure, enabled land speculators and usurers to acquire land at insignificant prices. The case of entire tribes being dispossessed in this manner was not uncommon at the time.

42-It was only around the 1870s that the land was distributed at a fixed price, and more for the benefit of large capitalist landowners or metropolitan enterprises.

43-The future development of colonial agriculture was not to make an intensive use of such factor which will remain under-utilised (even if some of the dunes never entered

into use) throughout the entire duration of colonisation.

44-Another factor which ought to be accounted for was that many of the expropriated peasants remained within the indigenous agricultural sector as sharecroppers. It was only when such a possibility was considerably reduced that one can speak of the definitive crisis of the peasant economic system.

45-As early as 1851 Algeria formed a custom union with France.

46-Kautsky, K. La Question Agraire: Etude sur les tendances de l'agriculture moderne. Paris. Maspero. 1979. P. 121.

One may also add the fact that when the formation of agricultural prices is considered, the category of settlers who benefit from such a ground rent, is directly put - every thing being equal - in a much favourable economic situation than the farmer or the peasant who has to buy his land.

47-Marx, K. Capital. Volume III. Laurence and Wishart. London 1974. P. 623.

48-It is worth pointing out that in its proceeding colonisation acquired the best land of all, i.e. the most fertile.

49-The history of colonial vineyards was marked by four important crisis: in 1893, 1900, 1904 and 1934 the result of each crisis leading to a higher land concentration.

50-H. Isnard, Vigne et colonisation en Algérie. Annales de géographie. Volume 58, 1949. P. 218.

51-Ibid. p. 26.

During the grape harvests the daily wage (i.e. from "sun rise to sun set") of Algerian workers fluctuated between Fr 1.25 and Fr 1.75. For the same activity European workers received a wage between Fr 2.5 and Fr 3.25 while those employed in the same task in France received Fr 5 for an 8 hour-work.

52-Quoted by C. Chaulet La Mitidja autogérée. S.N.E.D. Algiers 1971. pp. 27/28.

53-Tableaux de l'économie Algérienne statistique générale de l'Algérie, 1960, p. 135 quoted by Chaulet, C. Ibid. p. 34.

54-H. Isnard, Ibid. p. 214.

55-The extent of land concentration - as early as 1900 large farms of 500 and 200,000 ha were not uncommon - produced its own rationale for increased mechanisation. The sheer extent of the size of cereal farming was in itself a powerful drive towards the maximum mechanisation of the labour process.

56-In that sense intensive mechanisation seemed to be less aimed at increasing production but rather at increasing the rate of profit through a reduction in manpower cost. "If hard wheat did not experience the abandonment of barley, it was because it remained protected by high prices fixed by public authority.... a consequence of the complementarity of the Algerian and French economies." G. Duprat Révolution et autogestion en Algérie. Armand Collin, 1973. P. 78.

57-During the post World War Two period, the total amount of fertilisers for the entire agricultural needs did not exceed an average of 100 tons.

58-The study of the structures of colonial agriculture is derived from the 1950/51 census on Algerian agriculture conducted under the aegis of the F.A.O. The characteristics of such an agriculture at that date can be considered to be reflecting the most definitive and the most evolved form of colonial agriculture before the political independence of Algeria in 1962.

59-A. Benachenhou, Ibid. p. 259.

60-One assumes that there is or there can be a difference between the notion of a farmer and that of an owner. In the majority of the statistical findings there has been a drift from the notion of an owner to that of farm holder.

61-The marginalisation of this small French peasantry illustrates a contrario the real beneficiaries of colonisation, i.e. mainly large landowners who have become also large capitalists.

62-For over 12,000 cereal farmers, the average farm exceeded 120 ha.

63-Whenever land was suitable for its expansion vineyards has always "colonised" cereal land.

64-But farmers with 200 ha were not uncommon. In 1939 the farm owned by the

e ?
firm *La Société des Domaines du Caid Es Sebt* had an area of 2,000 ha (during this period 8% of farms belonged to companies).

65-Only smallholders (1,775 in all), were directly dependent on the labour force of their family members.

66-It was assessed that the use of a seasonal labour force by this category of farms amounted to about 19 million days work. Such a figure cannot be translated with accuracy in terms of a theoretical corresponding manpower. It can however be assumed to represent a few hundred thousands of workers: 350,000 if one assumes the employment of a worker during a period of 58 days work/year or 234,000 if one assumes a 3 month work/year.

67-Such a practice denotes that if the development of colonial capitalism produced an agrarian proletariat, it has not eliminated this pre-capitalist form of farming.

68-A broad estimate of the proportion between permanent and temporary workers can be given on the basis of the following calculation: Total employment in the colonial sector: 130,790 permanent workers+ 22 million of days work representing the contribution of the seasonal work force. On the assumption that a permanent worker works on average 300 days/year (or 25 days/month), it is about 39 million days of work which were provided by the 130,790 permanent workers. For the entire colonial sector, total employment would have amounted to about 60 million days of work, more than 1/3 of which provided by seasonal employment (if however the notion of full agricultural employment was relaxed to a much lower realistic figure than the 300 days, the proportion of seasonal workers would have been much more significant).

69-H. Isnard, *Ibid.* p. 9, who adds "the colonisation bred a vast Muslim proletariat, half-floating, whose means of subsistence were more and more reduced to the meagre wages paid by the masters of the soil". As it will be seen later on in this chapter the agricultural colonisation of Algeria, if it produced a proletarianisation of the peasants it did not produce any alternative mode of their employment. If the capitalist penetration produced the necessary divorce between the peasant and their means of

livelihood in the agricultural sector it however failed to generate an authentic capital accumulation in the industrial sphere. This experience of colonial capitalism offers a good illustration of an unachieved form of capital accumulation.

70-65% of holdings extended over 18% of the total land area of the indigenous agriculture. As such this situation prohibits any possible improvement of the economic situation of the majority of such smallholders.

71-The concentration of the colonial land was overwhelmingly located on the most fertile land. "Forced back into the hills and mountains, especially in Algeria and Tunisia, the native farmers have been compelled to plough slopes that were far too steep and, until the late war, the French had failed to instruct them in the technique of soil conservation" R. Dumont. Types of rural economy. Methuen and co. Ltd. 1970, p. 168. But if the first part of the statement is correct we however disagree with R. Dumont on the second part of the statement. The problem of marginalised peasants was not strictly speaking a matter of soil conservation but rather that of the roots of their insufficient land provision.

72-As seen earlier on, one of the characteristics of capital accumulation in the colonial context of Algeria was its fulfilment of "entrepreneurship" on a segregated basis: the financial and commercial colonial bodies were catering for the exclusive interests of the settlers. From the point of view of the indigenous farmers, the initial physical segregation associated with the sectoral distribution of the land, was further reinforced by the economic differentiation operated by the segregated access to the financial and commercial institutions of capital. "Access to the European credit funds and to the ordinary financial institutions was restrained if not prohibited by the political segregation and the status of the land. These bodies made of the French titles of property the condition of attribution of loans" (A. Benachenhou Ibid. p. 219). Given the concrete conditions under which emerged the dual structure of Algeria's agriculture, the distinction between "modern" (i.e. European sector) and "traditional" (i.e. "domestic" sector), becomes unavoidably filled with both a theoretical

misconception and an ideological mystification.

73-It was this social category, with that of the already landless peasants, which constantly fed the permanent flows of rural migrants as temporary labourers and/or permanent workers within the overall agricultural sector. This floating army of reserve supplied the first generation of the urban proletariat, both in Algeria and in France.

74-On average each small landholders farmed 3.5 ha. In the colonial sector the smallest farmers owned on average 3 ha. The difference between these two categories of peasants was that the latter lived off the land which enabled them to produce cash crops (market-garden products as well as animal husbandry, vineyards fruit trees etc.) while the former survived off a land of a much lower fertility which transformed him into a semi-proletarianised labourer forced to sell his labour force on a permanent or seasonal basis (the majority of the indigenous peasants resorted to outside employment on a systematic basis.

75-Communal pasture land, outside the boundary of individualized holdings, represented 3.7 million ha with 2.2 million ha (59%) located in areas under chronic rain shortage.

76-Such a specialisation of the agricultural activity was uniformly distributed throughout the total territory. The proportion of the agricultural land allocated to cereal farming and animal husbandry was respectively 91%, 83% and 90% in Eastern, Central and Western Algeria.

77-Though larger farms also resorted to wage earners, it was never on the same extent. The geographical distribution of wage earners between Eastern - 42%- (the predominant region of cereal farming regrouping the highest concentration of the indigenous agricultural sector) and Western Algeria - 80% - (the smallest concentration of indigenous agriculture and also the highest concentration of colonial agriculture), evidenced the little impact of the penetration of capitalist relations of production in the indigenous agricultural sector as a whole.

78-The importance of khamasse in the indigenous sector does not however imply that the rate of expropriation of peasants was higher than in the European agricultural sector. It only imply that the transformation of expropriated peasants does not take the same economic form: capitalist in the colonial sector (with some exceptions), it remained mainly formally capitalist in the indigenous sector (the relation of divorce of the producer from his means of production was not accompanied by a capitalist relation of combination between the labour force and the land).

79-In contrast, the number of farmers who worked the land on a leased basis did not significantly increase. Such a situation tends to suggest that the number of indigenous absentee landlords did not considerably increase during this period: 6% in 1901 and 8% in 1930. On the other hand the proportion of farmers in the colonial sector was much more important (25% in 1930) thus reflecting a situation whereby a much more important number of European landowners abandoned the direct management of their farm (in 1950 about 1/2 of the landowners were absentee landlords).

80-Quoted by A. Benachenhou, Ibid. p. 148.

81-Membership to such Societies was compulsory and the financial contribution was recovered by the same procedure as that of ordinary taxes.

82-Massiat *L'usure en Algérie*. 1961, p. 231. Ibid. p. 183.

83-The per head contribution can be considered to represent an increased burden for the poorest sections of the peasants: Fr 23 in 1900, Fr 30 in 1910, Fr 71 in 1920, Fr 133 in 1930 and Fr 150 in 1934. The insignificance of the financial help to the poor peasants (less than 1% of the total loans), was also in itself a further significant indicator of the deliberate discriminate colonial policy against peasant agriculture. It is also worth mentioning that less than half the membership contribution was systematically distributed (27% in 1934).

84-The allocation of agricultural credit during this period coincided with a period most favourable to the development of the indigenous sector with a set of measures aimed at fighting rural poverty. Such a policy was in effect a device to create the economic conditions capable of offsetting the socio-economic conditions of deprivation

and pauperisation upon which the popular - particularly peasant- backed movement of war of liberation was deriving more and more its strength.

85-The logic of mechanisation promoted by a generous credit policy seemed to be more geared towards the achievement of a labour cost reduction rather than increased yields.

86-Between 1930 and 1940 the proportion of smallholders between 0 and 10 ha fell from 26% to 20% of the total farm area of the colonial sector while farms above 100 ha increased their share from 74% to 80%. The total farms between these two dates fell from 26,153 to 25,000. Such a movement of concentration did not exclude the indigenous sector.

87-Between 1933 and 1936 a guaranteed price of Fr 115/quintal was in use. It was also this period that saw the creation of O.A.I.C, the Algerian marketing board for cereals in 1936 with competence extending over the monopoly of cereals trade on both the national and international markets.

88-Combined harvest^es increased from 449 (1930) to 1,200 (1947). This policy of mechanisation was achieved through a consolidation of the debt of farmers and a rise in agricultural credit. The development of mechanisation, a constancy of colonial cereal farming, must have produced permanent depressing effects on the level of employment.

89-Lazregh, M. The emergence of classes in Algeria. Westview Press. Boulder Colorado. 1976, particularly Chapter 4. *The Dynamic of Incipient Classes*, pp. 57-86 and Clegg, I. Op. Cit., Chapter 2. *A colonial Prehistory*, and particularly the Section entitled 'Nationalist Politics and revolution' pp. 31-38.

90-It is estimated that 1.5 million persons died during the 8 years that separated the official triggering of the military warfare against France and the official declaration of the political independence of Algeria in 1962.

91-The constitution of the land fund was based on the acquisition of land as well as the nationalisation of irrigated land insufficiently farmed. The resistance of settlers to such a reform explained to a large extent the failure of the programme which, if implemented, would have in fact required more than a simple redistribution of land.

The contradictions of the colonial power were such that while promoting a programme of land reform, it also embarked at the same time on one of the largest movement of expropriation of peasants after the start of the Algerian war of liberation in 1954. This policy of pacification which took the form of a massive movement of population regrouping, displaced away from their land about three million persons (1/4 of the population) between 1954 and 1960.

92-A. Benachenhou summarises as follows the significance of this new centre of capital accumulation: "In total, the capital accumulation in the oil sector, while achieving a non negligible economic "growth" was by nature geared towards exports and like wine during 80 years, put the Algerian economy into contribution *vis-à-vis* accumulation on a world scale; the control of French capital in this field of accumulation, cancelled any possibility to use it [oil] in order to start an authentic policy of development ". Ibid. p. 335.

93-Ollivier, M. La politique agraire de l'Algérie: évolution et perspective. thesis. Grenoble, 1972, p. 120. quoted by A. Benaouda Système Productif Algérien et indépendance nationale. OPU. Algiers. 1983. Tome I. P. 64

94-Through a series of subsidies and financial guaranties the export prices of the colonial sector have always tended to be above world prices.

95-A. Benachenhou. Ibid. p. 356.

96-H. Isnard quoted by A. Benachenhou. Ibid. p. 355.

97-It is worth mentioning that such rates of growth are net, i.e. they do not take into account the proportion of the population which had already emigrated. Moreover such rates ought to bear in mind the historical conditions which shaped the demographic development of the population: effects of years of famines, epidemic diseases, human losses due to the continuous military repression etc. all factors which combined tend to produce a deflationary effects on the different rates of urbanisation.

98-Despois, J. La population Algérienne au 31 Octobre 1854, Annales de Géographie, Volume 65. pp. 55/56 and Raffinot, M. and Jacquemot, P. Le capitalism d'état en

Algérie F. Maspéro, 1977, p. 220.

99-Norbey, O. The economy of Algeria The Economies of Africa. G. Allen and Unwin. 1969. p. 477.

On the basis of the then prevailing exchange rate, the average income per European was £365 while that of the indigenous only £29.5, a ratio of 1 to well above 12.

100-Ibid.

101-Amin, Samir The maghreb in the modern world: Algeria. Tunisia. Morocco. Chivers, Penguin edition, 1970.

102-Without exaggeration such a sector could be assimilated to a foreign sector and its representative those of foreign capital. The particular colonial experience of Algeria only draws too well a clear cut line between the economic interests of France through its colonists and those of the indigenous population.

103-The notion of enclave ought to be understood in its broadest sense so as to include not only the strictly productive sphere such as mining and agricultural but as well all those activities which guaranteed the reproduction of the colonial status of Algeria as such, i.e. the status necessary for the durability of its economic exploitation.

104-Which was catered for by the French industrial capital.

105-72% of the total farmland was devoted to cereals in the indigenous sector against only 55% in the colonial sector but the proportion of fallow land in the latter was 83% and only 63% in the former in 1950.

106-Such a pressure can be assessed through the contribution of each category of farm in the total cereals production. In 1950 21% of the total indigenous cereals production accrued to the category of holdings bellow 10 ha against 47% to holdings between 10 and 50 ha and 31% to holdings above 50 ha. The proportion of the above category of farms in the total farmland of the sector was respectively 18%, 43% and 39%.

107-M. Lesne Les centres de regroupement en Algérie in Annales de géographie, Volume 7. 1962, p. 600.

108-Ibid. p. 597.

109-No source has ever been able to assess the extent of the land thus withdrawn from cultivation.

110-The contribution of emigration in sustaining traditional farming (the main provider of emigrants), has always been important. In certain regions such remittances represented up to 80% of the their earnings. "The emigrants remittances increased from Fr 11 million in 1950 to 38 million in 1955. At this date such transfers represented an amount greater than the total bulk of agricultural wages". R. Benattig Politique économique de l'état et l'évolution de la situation de l'emploi et des revenus en milieu rural (Algérie 1962-1979), Thèse 3^{ème} cycle Paris. 1980. P. 21 quoted by S. Bedrani *L'agriculture Algérienne face au marché mondial* in Les Politiques Agraires en Algérie. CREA. Algiers (non dated). pp. 32/33 (footnote N°2).

111-G. Montchaussé Steppe Algérienne: causes et effets d'une desertisation. Peuples Méditerranéens. Volume 1-1977. pp. 141-142.

PART II

THE POST-COLONIAL INDUSTRIAL POLICY OF DEVELOPMENT: OIL RENT AND CAPITAL ACCUMULATION

Introduction

As we have seen in the previous chapter, the colonial era culminated in a violent national war of liberation which lasted 8 years of bitter fight resulting, on the Algerian side, in a death toll of 1.5 million. The end of French colonialism closed one period of conflicts and at the same time opened another. The fate of a new politically independent country with a colonial legacy whose weight was to prove "ever present in its absence" (1), was brought to the open in relation to both the inherited economic system at large as well as to the different domestic classes whose historical development was directly associated with the development of colonialism itself. The immediate outcome of the defeat of the French army resulted in an intense conflict for a vacant power and control of state apparatus (2). Contending classes and groups remained closely confined to petty bourgeois elements attached to the then main repository of power, the National Liberation Army. As pointed out by M. Lazreg the pre-independence goal of such a class was directly "an independent Algeria, where full expression of class interests would no longer be limited by colonial superstructure" (3). Power crystallisation and consolidation underwent three main phases: The provisional apparatus embodied in the GPRA (September 1958) and the Ben Bella régime of 1962-1965. From 1965 onwards, i.e. since the *coup d'état* against Ben Bella, the stability of the political system, and the consequent underlying continuity in its economic programme, has only been interrupted by the natural death of colonel H. Boumedienne.

Along with state consolidation, the transition from the colonial to post-colonial period

was accompanied with the setting up of the economic project compatible with its own reproduction: the promotion of an accelerated industrialisation (the post-colonial economic "strategy" inaugurated therefore the economic project most compatible with the reproduction of the new power-holders encrusted in the apparatus of the state). The identification of the post-colonial economic project with the role of the state is based on the economic pre-eminence of the state sector itself (in actual fact the pre-eminence of the state is that of a total hegemony embracing all aspects of social life). As a result of such an economic hegemony, state capital accumulation progressively impregnated through its structuring effects - in the form of a generalisation of commodity production - the entire Algerian social formation: in short capitalist development (ideologically referred to and perceived under the label of 'national development'), progressively imposes itself as the dominant social norm of material production. The full expression of the state economic policy as embodied in the successive plans from 1967 onwards, cannot however be understood outside the realisation of two important sets of factors: the initiation of reforms to render more compatible the new exigencies of the economic project with the consolidation of the interests of the class that controls the state, and the specific conditions under which it was possible to generate an important non-agricultural economic surplus capable of financing the ambitious state policy of industrial development. It is to these two points that we first turn our attention.

I. The pre-conditions of realisation of the state policy of accumulation.

A. The transitional period of reforms: 1962-1967.

The study of this period is essential to the understanding of the domestic preconditions vital for the promotion of capital accumulation, viz. the consolidation of the state and the constitution of its economic basis: the public sector. Seen in this context the mobilisation and allocation of economic surplus becomes inseparable from the consolidation of the state and its economic intervention. In other words the state

becomes the main expanding vector of capitalist relations of production spreading from the sustained extension of capital accumulation in the state public sector. The realisation of such an objective was achieved through a set of corresponding measures: the setting up of appropriate administrative structures in order to facilitate the implementation of the different plans of development, the extension and generalisation of the state ownership of the means of production in an expanding public sector initially based on the exclusion of foreign interests through nationalisation (4), the centralisation and control of the financial and banking conditions under which the circulation and production of capital is guaranteed, the creation of the economic units which are the backbone of the public sector etc. The fulfilment of such objectives proceeded along the following lines.

a. The administrative reforms.

After 1962 the administrative institutions inherited from the colonial era were reformed in order to adapt them to the requirements of the new mode of capital accumulation. The nature of these administrative reforms was marked by a great decentralisation at the communal and regional level, the two levels of the national implementation. The territory was divided into: *Wilayate* (administrative regions) and communes (village level). The popular assembly of the *Wilayate* was chaired by a representative of the central government while the structure of the A.p.Cs (popular assemblies of the communes) and the election of their chairmen was decided by the electors of the commune (at least in theory). Both the commune and the *Wilaya* (singular of *Wilayate*) enjoy a financial autonomy but they still depend very much on the central government for their development budget.

b. The policy of nationalisation.

A greatly decentralised and co-ordinated administrative structure was felt inefficient if on the other hand the state does not enjoy any control over foreign capital (5). In May, 1966 insurance and mining companies were nationalised. During the summer of 1967 the distribution networks of ESSO, MOBIL and B.P were nationalised. During the

same year the interests of many foreign manufacturing companies were also affected. The programme of nationalisation has gone well beyond the period of transition and affected mainly oil interests (6) particularly at prospecting and production level.

c. The creation of state enterprises.

All nationalised assets were put under the management of state owned companies which became the main economic agents of state capital accumulation (7). The power of the state has been further extended by the creation of specialised boards with monopoly powers: ONACO (the Algerian marketing board) with a monopoly over food imports and exports, OAT with a monopoly over tourist industry, ONAP fishery, ONT transport, EGA electricity and gas, and SNCFA railways etc.

d. The financial measures.

Until 1962 the management of the treasury and the supply of money and insurance were under the direct control of France. As a sign of her financial and monetary independence Algeria created the BCA (Central Bank of Algeria) and the FAD (the Algerian development fund) in 1962. A national insurance company was created in 1963 and during the same year foreign exchange control was introduced. In 1964 the Algerian currency was created and its value defined (8). During the same year the Algerian saving Bank (CNEP) was also created. Prepared by such reforms Algeria embarked on its ambitious policy of accumulation.

B. The source of capital accumulation: oil rent.

The study of the experience of Algerian development is inseparable from the study of two interwoven sets of conditions under which capital accumulation was being achieved: the mobilisation of the economic surplus itself on the one hand, and the conditions under which social groups operated such a mobilisation in view of its allocation on the other. In the conditions surrounding the emergence of an openly deliberate Algerian policy of development (APD) (9), the central question remains that of the generation of the source of accumulation itself or more precisely the study

of the conditions which allowed for the realisation of the objective of capital accumulation at the level of the Algerian economic formation. In the context of Algeria the main source of capital accumulation was oil and the nature of such a product makes it also the source of an important rent.

As a form of goods produced for sale and purchase, oil is a commodity but a commodity whose production takes place mainly on an international scale. As such, it is the commodity upon which the network of international capital in the world energy market is built. Accordingly the oil industry epitomises the economic sector where the internationalisation of capital is best achieved. From the standpoint of exporting countries, the production of oil is also the *de facto* basis of their economic integration (not to say their immersion), in the world capitalist market relations (10). In order to understand the importance of oil for the generation of capital accumulation, it is therefore important to understand the significance that such a commodity plays in the process of capital valorisation at large on the one hand, and, on the other, the conditions under which the Algerian ruling class has been able to appropriate to its advantage a share of the world surplus profit on the world energy sector.

a. Oil and capital: a theoretical assessment.

The reliance of capital on energy and particularly on the oil form of energy, derives from the logic of capital valorisation itself. In the capitalist mode of production, the dynamic of capital accumulation is based on the ability of capital to be of a self-generating value. The mode of functioning of such a value depends in fact upon the rate at which surplus value is extracted from labour. In the modern, present conditions of capitalist relations of production, the dominant form of surplus value is relative surplus value, i.e. surplus value extracted within the conditions of increased labour productivity compatible with a shortening of the working day (11). The conditions under which the productive power of the labour force is multiplied is obviously through technological sophistication which increases the organic composition of capital (c/v). The on-going technological capitalist revolution whereby the extent of unpaid

labour (surplus-value) is increased (and that of the value of the labour power decreased) to meet the limitless needs of capital valorisation revolves therefore around the system of machines. As far as energy consumption is concerned it is clear, that "capital's need for energy cannot be understood until capital's need for machines has been understood, because energy is simply one input into the mechanised production of commodities" (12). The energy need of capital is further enhanced by the properties of oil commodity itself, i.e. its use-value and its exchange-value. Thus, in terms of heat content(13), purity and the span of by-products, oil offers unique features when compared to alternative carbon-bearing sources of energy (14). The favourable use-value form of oil is also combined with the fact that its favourable exchange-value makes it also the cheapest form of energy (Figure II. 1 gives the exchange value relation of the main energy sources on the world market). As the cheapest energy, oil has therefore become the dominant form of energy consumption on the world market, representing about 40% of total energy consumption in 1984.

Table II.1: Development and structure of consumption of primary energy for 1960 & 1970 (U= million CUs (coal units), and 1980 (U=million tons of oil equivalent).

Sources of energy	World						Western Europe					
	1960	%	1970	%	1984	%	1960	%	1970	%	1984	%
Coal & other fuels	2,111	46%	2,263	31%	2,179	30%	509	57%	423	28%	256	20%
Oil	1,610	35%	3,285	45%	2,844	39%	286	32%	877	58%	591	47%
Gas	589	13%	1,241	17%	1,409	19%	10	1%	91	6%	190	15%
Hydro-energy	276	6%	511	7%	485	6%	89	10%	106	7%	107	8%
Nuclear	-	-	-	-	282	4%	-	-	15	1%	104	8%
Total	4,600		7,300*		7,201		894		1,512		1,249	

Source: M. Massarat in "Oil and class struggle". Edited by p. Nore & T. Turner. Zed Press, London. 1980. p. 37 & BP Review of World Gas. August 1985. (*Excluding nuclear).

Viewed from the point of view of commodity production, what confers special importance to oil as a commodity are the conditions under which the mechanisms of price and profit determination are operated. In such a context what is so special about this particular commodity is the level of surplus profit it can command at the level of the world market and the intensity of the conflicts it can trigger at the level of the

surplus profit among oil companies, exporting countries and importing countries (15).

b.The mode of determination of oil prices of production.

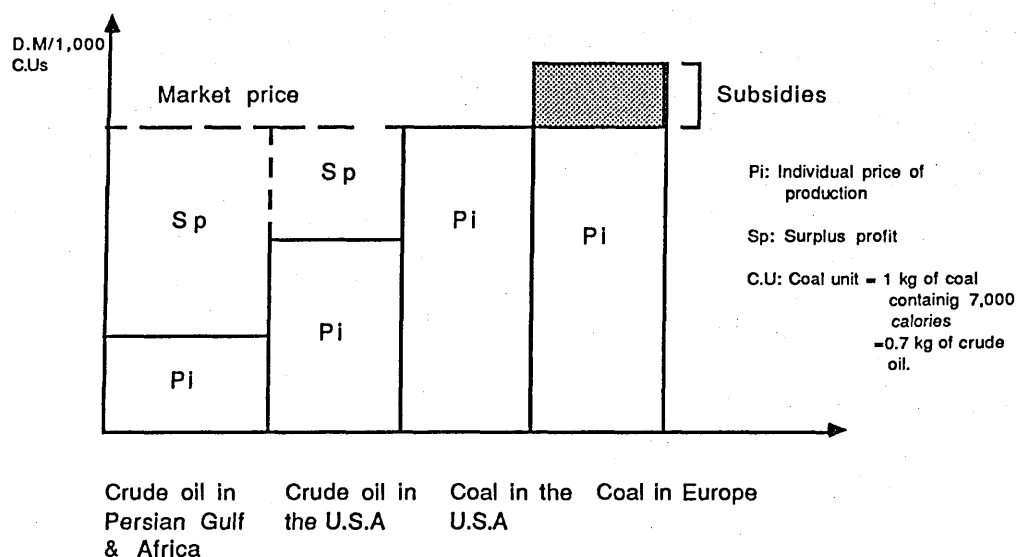
The framework of oil price determination and profit appropriation is not confined to national markets alone but tends towards a world market determination. In this respect the very existence of an international fixed oil price is in itself the expression of an international mode of price determination which overrides the specific peculiarities of individual regional production conditions. The sphere of production immediately dependent on nature (such as the extractive or agricultural spheres of production) displays its own peculiarities: the determination of its price of production is operated independently of the capacities of capital, unlike for instance in manufacturing, whereby market prices reflect the level of prices determined in the last analysis (16) on the basis of average labour productivity. Indeed, whenever a fraction of capital operating in the manufacturing sphere increases the level of labour productivity beyond the average labour productivity as a result of a technological improvement of the conditions of production which therefore lowers the cost of production, it is able to capture a profit in excess of the average profit, i.e. to a point allowed by the existing level of prices of production (17). The ability of capital to generate the condition of its valorisation through an ever increasing labour productivity eliminates in the same process the temporary conditions under which a fraction of capital has been able so far to realise an excess profit above the average profit: the elevation of labour productivity and the spread of its penetration into other sectors of the economy, establishes a new level of market price lower than the previous one. All fractions of individual capitals which are unable to adjust to the new average social conditions of production will be progressively eliminated and replaced by the most performing capitals. In the last analysis, the end result of this mode of production tends towards the realisation of increasing lower costs of production and therefore lower prices of production. In other words market prices tend to be determined as a result of the

generalisation of increased productivity as the price of production is regulated by the most favourable conditions of production.

When transposed on the sphere of production immediately dependent on nature, this mode of determination of market prices undergoes a major modification as a result of the inability of capital to achieve the generalisation of a higher labour productivity homogeneously distributed. The mode of operation of the law of value is limited by nature itself. Thus the uneven distribution of qualitatively different natural resources in time and space is at the same time an uneven distribution of the natural productiveness of labour for a given application of capital. As social demand (national and international) increases for the products of the extractive sphere (as is the case for oil) the necessity to exploit new resources in less natural favourable conditions becomes socially unavoidable. This shift in production creates a surplus-profit accruing to the capital allowing a higher labour productivity (18) as a result of the difference between the price of production of this particular capital and the price of production of the capitals invested in the rest of the sphere of production. But, as pointed out by K.Marx "the power of nature is not the source of surplus profit, but only its natural basis, because this natural basis permits an exceptionally increase in the productiveness of labour. In the same way, use-value is in general the bearer of exchange-value, not its cause" (19). Unlike manufacturing, the price of production in the extractive sphere is determined at the margin, i.e. by the market price of those commodities produced under the least advantageous production conditions (20). The objective of meeting a given level of demand prevents on the one hand the elimination of the capital producing with the lowest labour productivity and guarantees, on the other, that this capital gets its share of average profit (21). The energy market (of which as we have previously seen oil is an important component-part) illustrates clearly such a mode of price determination. The following table shows how on the energy market, because of the necessity to meet a given social demand, the least favourable conditions of energy production (here coal) regulate in effect the price of the commodity energy and consequently help determine the different levels of surplus

profit which accompany the range of the different natural conditions under which the world energy production takes place. As far as the carbon bearing sources of energy (oil, gas, coal etc.) are therefore concerned, it can be said along with M.Massarat that "the individual price of production of American coal regulates the market value and market price of all sources of energy, in as much as its individual price of production obtains precisely the average profit" (22).

Figure II. 1: Exchange-value relation of main energy sources on world market (23).
($U = D.M/1,000$ C.U.s).



Source: M. Massarat, op., cit. p. 36.

Because of favourable natural conditions capital has been able to generate the highest labour productivity in the Persian gulf and Africa (during the 1960s the actual production cost was on average \$0.54/ton of crude oil in the Near East, \$2.16/ton of Lybian crude, \$4.21/ton of Venezuelan crude. During the same period the cost of production for coal was \$7.4/ton of US coal and \$15/ton of West European coal). Moreover, because of the higher prices for alternative sources of energy, such a price determination potentially opens a conflict and struggle for control over surplus profit. As stated above, when land and its resources are subsumed under landed property, as is the case of oil fields (24), the case of generation of surplus profit raises the question of its distribution. In so far as the question which interests us is concerned, i.e. the

generation of an investment fund for the realisation of the Algerian policy of capital accumulation, the conditions under which the surplus-profit generated in the world energy market is appropriated is of fundamental importance.

c. Surplus-profit and oil rent.

The mode of appropriation of surplus-profit on the world oil sector has basically depended on the extent of the struggle between the conflicting interests which opposed the multinational oil companies, the oil importing countries and the oil producing countries. Such a conflict appears clearly in the mode of distribution between company profit, ground-rent accruing to exporting countries and taxes accruing to importing countries. As far as the historical status of the oil-producing countries is concerned, particularly those belonging to the category of peripheral capitalism, the terms under which their share of surplus profit was appropriated are in themselves a revealing indicator of the changes operating and taking place at the level of the class structure of their economic formation. Thus, as long as the multinational oil corporations operated in the historical context of free concessions, the feudal relation of production which characterised the majority of backward countries prevented any alteration in the dominant mode of appropriation of surplus-profit. The direct and indirect subordinate colonial status of most oil providing countries (the outcome of an economic formation dominated by feudal and/or precapitalist relations of production), provided for the class basis upon which oil companies were able to minimise the share of surplus-profit accruing to host countries. The alliance between international capital and the feudal ruling classes fulfilled therefore the conditions for reproduction of their mutual interests: unchallenged terms of access to oil fields for the companies and guaranteed royalties for the rentier state (25). Like the Trojan horse, the extension of oil companies in peripheral countries introduced at the same time capitalist relations of production. As such, the introduction of capitalist relations and their development are not without major social and class transformation effects. The real breakthrough in the redistribution of oil surplus-profit occurred during the mid-1970s. Far from being a

simple increase in the posted prices of oil (26), the quadrupling of oil prices, realised through the cartel OPEC, has only been possible because of the deep social transformation which has been taking place within the oil exporting countries themselves. The feed back effect of the development of capitalist relations of production within the oil industry brought into the open the challenging power of new domestic hegemonic classes which succeeded in altering the old power structure between the nation state and international capital (the class homogeneity in the economic formations of the OPEC countries is however far from being a reality; the different modes to which the different uses of oil are subject is a clear. Further, it is coincidental that the most dynamic proponents of the 1973/74 oil hikes were precisely those countries such as Iraq, Algeria and Libya which "had the most explicitly 'development-oriented' ruling classes" (27), as opposed to countries like Saudi Arabia, a typical example of a feudal monarchy which uses a large fraction of its oil rent in property, treasury bonds and luxury imports. The fear of industrialisation in such a country is to be found in the political fear of the unavoidable creation of a working class that such an industrialisation would necessarily entail. The systematic reliance on a foreign labour force is from the point of view of class rationality the ideal solution to the industrialisation contradiction). Through the price crisis of the 1970s, one witnesses more particularly the metamorphosis of the state as a rent-receiving landlord into a state as a capitalist or, in other words, the transition from a precapitalist mode of production to a newly emerging capitalist mode of production. The magnitude of the share of surplus-profit appropriated by the oil exporting countries is in itself clear evidence of the deep penetration of capitalist relations of production.

Table II. 2: Distribution of oil surplus-profit between ground rent, petroleum taxes in importing countries and company profits (U=US \$ million).

Year	OPEC oil producing countries		Oil companies		OECD oil consuming countries*		Total
	Ground rent	% share	Profit	% share	Taxes	% share	
1950	391	(16%)	895	(37%)	1,123	(47%)	2,409
1955	1,569	(18%)	1,536	(17%)	5,689	(65%)	8,794
1960	2,118	(20%)	2,453	(23%)	6,181	(57%)	10,814
1966	4,792	(20%)	4,799	(20%)	14,654	(60%)	24,245
1970	7,343	(20%)	7,204	(19%)	23,343	(61%)	37,889
1972	13,908	(22%)	7,808	(12%)	41,119	(66%)	62,835
1973	22,691	(23%)	13,428	(14%)	58,602	(63%)	97,772
1974	95,601	(53%)	21,377	(12%)	62,715	(35%)	179,693
1975	85,277	(50%)	17,952	(11%)	68,531	(39%)	171,760

Source: M. Massarat. *Ibid.* p. 56. (*excluding USA & Canada).

Up to 1973 (with the exclusion however of 1950) and against commonly held beliefs, the largest share (about 60%) of oil surplus-profit had actually been accruing to the oil importing countries in the form of different taxes. Until that year the profit distributed between OPEC countries and oil companies had been more or less evenly distributed, averaging about 20%. After 1972, though increased in absolute terms, the relative share of company profits fell to around 11% of total oil profits (beyond such figures, one ought however to point out that it is very difficult to assess with accuracy the real extent of corporate oil companies profit. Their world activities, the diversification of their downstream activities, the secrecy which surrounds their internal financial situation makes it very difficult, even for insiders, to be able to assess the extent of their actual profits). The largest share of profit appropriation took place within oil producing countries: between 1974 and 1975 it was more than half of the surplus-profit generated in the entire oil industry which was appropriated by the OPEC countries alone (28). It is this mass of surplus-profit and its appropriation by the oil exporting countries which acted as a springboard for the consolidation of their respective ruling classes as well as for the further enhancement of capitalist relations of production within their economic formation. It is precisely in the framework of such a context (29) that the Algerian state bourgeoisie acquired the means to establish its own class hegemony over the rest of the society through the

implementation of its own project of capital accumulation. The international dimension of capital accumulation being established we now turn to the study of the actual mode of utilisation of oil rent.

II. The mode of consumption of oil rent: the Algerian policy of development.

The mode of consumption of oil rent has mainly consisted in its productive consumption, that is its use for capital accumulation purposes. The study of this accumulation, commonly referred to as the Algerian strategy of development (ASD), is conducted through three main aspects: The theoretical justification of the type of accumulation promoted, the embodiment of the strategy of investment through the study of the different development plans and the conditions of realisation of the policy of accumulation and the restatement of the ASD.

A. The theoretical formulation of the type of accumulation promoted.

Broadly speaking the Algerian model of development (AMD), is described by its proponents, the state and its representatives, as a strategy whose aim is to secure the "economic independence" and full employment - in particular, 1980 was seen as the point when the full employment of the labour force would have been achieved - on the basis of the valorisation of natural national resources based on the setting up and development of basic industries. Concretely put, the process of capital accumulation viewed in the form of an important gross formation of fixed capital embodied in the heavy branches of industry was to be financed through the export proceeds of the most important of Algeria's national resources, i.e. hydrocarbons and other mineral resources. An open priority for industry in general and heavy industry in particular is therefore at the heart of the ASD, while the concomitant options of the industrial choice such as full employment and introversion are seen as the unavoidable long-term effects or the natural by-product of the working of the model (the notion of introversion or economic independence tends to imply that Algeria will develop the

ability to produce its own technology, i.e. to be able to internally reproduce the technical basis of its labour process; a further implication of the notion of introversion is that the intra and inter-sectoral imbalances will be progressively eliminated within the national economy)

a. The industrial option of the ASD: the model of industrialising industries.

The theoretical justification of the industrial option of the mode of capital accumulation finds its architect in the person of the French economist G.D. De Bernis. The central option of this model revolves around the identification of those industries capable of inducing industrialisation for the creation of industries by itself does not necessarily mean industrialisation: "Industrialisation is not the construction of a collection of industrial units linked between themselves, but one which represents a process of total restructuring of an economic and social set-up under the influence of coherent sets of machines" (30). In other words, for an effective policy of development to be operational it is important that it is based on a category of industries which can be labelled "industrialising industries". The choice of such industries must meet two objectives: Increase labour productivity in agriculture through the supply of industrial inputs and guarantee the development of the industrial sector itself (prior to the development of an industrial sector, the increase of labour productivity in agriculture could be achieved in a first stage through what the author calls "progress in organisation", i.e. the re-structuration of the relation of land ownership through a programme of land reform).

The condition of realisation of the first objective depending on the second, it is therefore to the treatment of the second element that De Bernis devotes most of his argumentation. The choice of such industries was not selected solely according to the needs of agriculture but also according to the needs of a self-sustained industrial development capable of absorbing the employment requirement of the urban population

as well as that of the faction of the agricultural population which has been freed as a result of the modernisation and development of the productive forces in agriculture (the articulation between agriculture and industry is at the heart of the De Bernis' model, but it is an articulation seen from an industrialist's point of view similar to that experienced by most developed capitalist countries. In that sense it is for instance radically different from the Chinese agricultural model of development whereby the industrial development was at the service of agriculture). The selection of those industries capable of promoting industrialisation has been justified on grounds of historical experience. The textile industry in early capitalist England, based on an important domestic and international demand (the restrictions imposed on the domestic Indian cotton industry expanded overnight the development of its English counterpart), triggered unprecedented opportunities for its own expansion through and with the help of the development of the upward stream sector of industries specialised in the manufacturing of textile machinery. "It was therefore through the upward stream effect linked to the mechanical industry that the industrialisation effect could spread in all other sectors, which, owing to the accumulated progress in mechanical engineering, could in turn improve their techniques" (31). In other words, had the mechanical industry not been able to provide for the development of textile machinery, the development of the English textile industry would very probably have been lost to foreign competition. In the final analysis the determinant element which made possible the process of industrialisation was not the textile industry *per se* but rather the impulse brought on the successive immediate upward stream industries which contributed to the creation of the wave-type diffusion of technical progress and innovation. The pattern of railway development was similarly interpreted: its development induced "an important demand for the products of the mechanical and steel industry. In turn the development of these last two industries induced the development of all related industries until the movement became self-generating" (32). It goes without saying that the generation of the process of industrialisation can be seriously hampered if part of its dynamic is lost to another country, i.e. if the increase in the

essential demand generated the development of upward stream industries located outside the boundary of the domestic economy. Thus the specific industrial option of the De Bernis model based on the notion of industrialising industries revolves mainly around those upward stream industries capable of inducing the necessary backward linkage effects associated with the input provision of every non-primary industry (33). Once set up, such industries will therefore provide for the necessary industrial inputs required both by the agricultural sector in the form of fertilisers, and by the industrial sector itself under in the form of tool equipment and all sorts of intermediary goods which enter the progressive build up of the capital goods sector itself. Industrialising industries, i.e. those industries which modernise agriculture and build up the industrial sector are therefore "the steel industry with its impact on the development of metallurgy, and mechanical industry, on the one hand, and the chemical industry on the other" (34). Thus defined, the De Bernis model radically differs from the import substitution model (I.S.M).

b. The import substitution (IS) model and the industrialising industries (II) model .

I.S. is another conception of industrialisation based on the substitution of imported consumer goods by their domestic production. As such this policy involves in fact two types of substitution. At the level of international trade, imports of consumer goods are substituted by imports of capital goods (the domestic production of consumer goods requires now the import of their means of production); at the level of domestic market, imports of consumer goods are substituted by the domestic production of consumer goods. The pursuit of this policy is based on the objective of meeting the already existing demand, i.e. that of high income groups, as well as that generated through the increase in employment opportunities linked with the setting up of the consumer goods industry. The promotion of an I.S. policy involves the promotion of local industrialists at the expense of the producers catering for the export sector. The

set of typical policy measures favouring this mode of industrialisation and the local industrialists consists of an overvaluation of the local currency in order to relatively cheapen imports, the erection of custom barriers for the protection of the nascent industries, and the maximisation of agricultural surplus extraction for the financing of imports etc. Ultimately the pursuit of this line of policy tends to be self-defeating as the agricultural export proceeds tend to be the main source for financing the constant imports of the means of production necessary for the setting up of the consumer goods sector. Once this policy goes beyond the results of the first stage of its implementation the first signs of its limits appear under the form of an "insufficient domestic demand, a low labour productivity in the agricultural sector, and the impossibility of the constitution, from downstream to upward stream, of integrated lines of production without entering into an increasing costly technological dependency" (35). If the I.S. model and the model of I.I. are polarised, as far as their industrial premises are concerned, between consumer goods industries and capital goods industries, they however display one important similarity: they both rely on an export sector to finance capital accumulation however essential the stress on the difference in the nature of their import content may appear. From that standpoint the imports of machines to produce consumer goods is indeed very different from the importation of machines to produce other machines, i.e. the imports of machines necessary to the setting up of a capital goods sector. In other words the choice of sectors (consumer goods vis. capital goods) determines the nature of imports. This sectoral emphasis implies further differences. While the I.S. model tends to reflect a strategy of development dominated by private industrial interests (domestic and international), the I.I. model on the other hand translates socio-economic interests largely vested in a powerful state public sector where private interests, if not absent, are not however overtly the pivot of capital formation (36). The nature of the sectoral option of the I.I. model further involves its own logic. Unlike the I.S. model, it requires a minimum form of planning of resource allocation in order to take into account the nature of investments involved which require long maturing periods and a certain form of

balance in their distribution between the different branches of the capital goods sector. In so far as the investment fund is diverted away from consumer industries, the setting up of a capital goods sector is unavoidably accompanied by a policy of austerity in the short and middle term depending on the period that is required for the manifestation of the actual benefits of industrialisation as well as the intensity of their diffusion. In short the I.I. model is in essence a long term strategy of development based on the ultimate industrialisation of the economy and the spread of modern techniques to agriculture. In the particular context of Algeria the development of an integrated industrial economy is also thought to be achieved if it is based on the use of the most advanced techniques of production, a means of speeding up the diffusion of industrialising effects of the leading industries (or growth poles). Like the I.S. model, the De Bernis model appears therefore as the justification of a specific form of development of the productive forces exclusively viewed in terms of the development of a particular industrial sector, the ramification of which provides for the overall elevation of social labour productivity. The significance of De Bernis industrial paradigm cannot be attempted at this point. What however ought to be pointed at is the extent to which it is methodologically correct to transpose on a developing country a mode of development of the productive forces, i.e. mainly that of developed capitalist countries, as if it is a development in itself, unavoidable in nature and independent of its specific beneficiaries (37). The assessment of such a point requires however that we first evaluate the model in its concrete form.

B.The embodiment of the Algerian strategy of development.

The history of the ASD goes back to 1967 with the implementation of the first plan: the Triennial Plan 1967-69. The subsequent plans were the Triennial Plan 1970-73 and the Second Four Year Plan 1974-77. The period 1978-79 which was formally an outside plan period that served finish what was left from the previous plans, was followed by the First Five-Year Plan 1980-84 and the Second Five-Year Plan 1985-89 (as far as our study is concerned its scope does not go beyond 1980. One of the

reasons for this limit is that the study of the nature of capital accumulation after 1980 is simply a continuation of the trend identified during the first three plans).

a. The development plans: an overall view.

The initiation of capital accumulation during post independent Algeria finds its embodiment in the first plans of development. The overall characteristic which emerges from such plans is the magnitude of investments involved.

Table II. 3: Magnitude of planned investment at current prices (AD millions).

Year	Pre-plan period	Triennial period	1st Quadriennial period	2nd quadriennial period	1978
1963	1,344	5,980 *			
1963	1,881				
1966	1,493				
1967		1,866	7,561 *		
1968		2,507			
1969		3,188			
1970			6,218	35,906 *	
1971			17,429		
1972			9,259		
1973			13,000		
1974				15,438	110,612 *
1975				22,405	
1976				28,369	
1977				44,400	
1978					55,710

Source: Ch. Palloix "Industrialisation et financement lors des 2 plans Quadriennaux (1970-77). Revue du Tiers Monde Tome XXI. N 83. Juillet/Septembre 1980. p. 537. (* refers to the total magnitude of investments of the respective plan periods).

After the pre-plan period, the volume of investments literally rocketed from the 3 Year-plan onwards. The 1974/77 level of investment was 15 times that of the first plan while the investment for the year 1978 alone was already half of the record level of the second Four-Year plan. Expressed in relation to GDP, the weight of the investment effort was even more significant regarding the rate of accumulation.

Table II. 4: The accumulation effort as a percentage of GDP.

1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
10%	13%	8%	10%	11%	13%	15%	28%	33%	35%	41%	32%	40%	45%	55%

Source: Séries statistiques 1967-1981. MPAT. Algiers. October 1984. C. Palloix. Ibid.

By the end of the Second Four-Year Plan gross domestic investment accounted for over half total GDP. This gross fixed capital formation did not include the Investment contribution which took place outside the public sector, however small it may seem to be (38). As such, the rate of investment promoted by the Algerian ruling class is not simply high by the standard of domestic economy alone. Algeria's considerable investment effort was also one of the highest in the world.

Table II. 5: Comparative investment effort for some selected countries.

Countries	Gross domestic investment (as a % of GDP) at current prices		Gross domestic investment Average annual growth rate (%) (constant prices)	
	1960/73	1965/73	1960/73	1965/73
Algeria	29.8	29.9	7.7%	20.7%
Argentina	19.6	19.6	5.2%	7.7%
Barbados	22.7	22.8	5.0%	5.6%
Bolivia	16.0	16.3	3.2%	1.2%
Brazil	18.2	18.2	8.5%	13.5%
China (republic)	24.1	18.2	15.3%	13.5%
Egypt	14.4	13.8	1.6%	2.2%
Ethiopia	13.3	13.8	6.4%	5.6%
Greece	27.6	28.3	9.0%	10.0%
Hong Kong	22.1	22.2	10.2%	9.2%
India	15.8	16.5	4.1%	4.0%
Ireland	15.8	16.5	4.1%	4.0%
Malaysia	16.7	17.2	7.4%	7.1%
Morocco	13.2	13.9	6.8%	6.4%
Iran	18.2	19.5	13.5%	14.3%

Source: United Nations World Tables. 1976.

In all aspects the period of plans was one of intense investment. From the standpoint of their structure, such investments are even more important.

b. Investment allocation and the centres of capital accumulation.

The distribution of the investment fund between the main sectors of the economy reveals the industrial emphasis of the ASD.

Table II. 6: Share of industry in total planned investment at current prices (U: AD millions).

Plans	Planned investments			Realisations		
	Total investment	Industrial investment	% share of industrial investment	Total investment	Industrial investment	% share of industrial investment
1967/69	10,559	5,168	49%	7,651	6,057	79% *
1970/73	24,400	10,118	41%	35,906	19,015	53%
1974/77	110,000	48,000	43%	110,612	65,314	59%

Source: Ch. Palloix. Ibid. (39)

With an average share of 58% of total investment being channelled to the industrial sector, the industrial option of the ASD transpires through the 11 planned years. In comparison, the share of total investment accruing to agriculture was 12% (1967/69) (40), 15% (1970/73) and 10% (1974/77) (41). The supremacy of industrial investment in turn imposes itself with its own feature: the polarisation of industrial investment themselves.

c. The distribution of industrial investments.

Although about 60% of total investment went to industry, the industrial projects themselves were not evenly distributed. One single sector alone, the hydrocarbon sector, absorbed the highest share of total industrial investments while sections such as mechanical & electrical industries, intermediate goods industries (steel, metallurgy, building goods etc.) and consumer goods industries absorbed the rest of industrial investment (42).

Table II. 7: Overall structure of industrial investments.

Industrial sectors	1967/69 plan	1970/73 plan	1974/77 plan	Total (1967/77)
Hydrocarbons	3,223 (53%)	7,880 (45%)	28,936 (47%)	40,039 (47%)
Capital & consumer goods sectors	2,834 (47%)	9,638 (55%)	32,834 (53%)	45,306 (53%)
TOTAL	6,057 (100)	17,518 (100)	61,770 (100)	85,345 (100)

Source: Ibid p. 539.

The characteristics of such a structure can be considered to be at the heart of the

Algerian policy of development. As such this policy involves two distinct centres of capital formation. A gross fixed capital formation in the hydrocarbons sector harnessed to the double requirement of ensuring on the one hand the international valorisation of hydrocarbons and the procurement for the rest of the economic sectors of the financial means of accumulation, and on the other hand a gross fixed capital formation in the industrial sectors best suited for overall domestic capital accumulation. Let us consider closely the significance of such a distinction.

1.The role of capital accumulation in the export sector.

In the introductory section of this chapter, the role of oil was mainly perceived in the context of the international sphere of capital circulation under the category of oil rent. The oil price increase of 1974 was particularly seen as the device for operating a reallocation of surplus profit to the advantage of oil exporting countries. The particular conditions under which each oil producing country operated its own strategy of oil rent maximisation was not however considered at that stage. The increase in oil prices is not in itself a sufficient condition (however necessary it may be) for the maximisation of oil rent. An efficient control over the surplus profit generated in the oil industry requires conditions other than those of the simple valorisation of the sale prices. An increase in oil prices, if it does increase the value of oil products, does not by itself ensure maximising the share accruing to oil producers. The effective domestic control over research, exploitation, prospecting, production, distribution and marketing are all important stages to be integrated within a policy of surplus maximisation and as such are as important as the price increase itself. The importance of the extent of capitalist relations of production determine in turn whether oil rent is appropriated by way of a simple increase in posted prices, as is the case of countries like Saudi Arabia, or whether such an increase is appropriated involving a systematic control from the oil fields level, to the filling station, as is to a certain extent the case in development oriented countries like Algeria, Iraq and to a lesser degree Libya. Nationalisation and the promotion of a domestic oil company at the level of oil

exporting countries, in conjunction with oil prices increase are without any doubt much more powerful mechanisms of surplus retention than a simple increase of posted prices. The policy devised by the Algerian State to organise the mechanisms of control over the generation of its economic surplus in the oil sphere of production was very close to such a scenario. As early as the 1950s hydrocarbons were already perceived as an alternative to the so far prevailing colonial mode of capital accumulation based on cereal farming and vinegrowing. In post independent Algeria, the importance of the economic weight of hydrocarbons was easily perceived both as a centre of capital accumulation in its own right and as an important source of foreign earnings.

Table II. 8: The economic weight of hydrocarbons in the Algerian economy (U: Billions of AD & %)

Year	1. GDP without its hydrocarbons component	2. Hydrocarbons component of GDP	3. Weight of 2 into 1
1965	11,000	2,100	19%
1966	10,300	2,700	26%
1967	11,271	2,578	26%
1968	13,059	2,794	20%
1969	14,280	2,954	20%
1970	16,344	3,214	19%
1971	17,892	2,290	13%
1972	20,182	4,451	22%
1973	22,033	6,452	29%
1974	25,424	18,418	72%
1975	30,868	15,561	50%
1976	38,019	19,630	51%
1977	44,019	23,585	53%
1978	60,005	24,470	41%

Source: M. Raffinot & P. Jacquemot. "Le capitalism d'état Algérien". F. Maspéro. 1977 and Séries statistiques 1984.

From the mid 1960s onwards the weight of hydrocarbons became increasingly predominant in the social product. Since 1973 hydrocarbons emerged as the most single important economic activity of all sectors (before 1973 it was only marginally second to the activity of trade). As a source of foreign earnings hydrocarbon contribution emerged over the years as the most significant and single source of export earnings.

Table II. 9: Share of hydrocarbons in total export earnings(%).

1954	1958	1963	1965	1967	1974	1977	1980	1982	1983	1984
0.3%	2%	61%	54%	77%	92%	96%	98%	98%	98%	97.5%

Source: UN. Yearbook of International Trade Statistics.

The transition from colonial to post-colonial Algeria clearly reads in the radical shift that the hegemonic weight of hydrocarbon earnings operated against the contribution of agriculture. Compared to the insignificant performance of the 1950s the 1980 figure reveals the extent to which, with 98% of total exports earnings, the international contribution of oil has become *de facto* the sole contribution of the entire Algerian economy. But for hydrocarbons to become the condition for the realisation of capital accumulation requires however that the condition for the realisation of such a policy is being met. In other words, the mode of allocation of the hydrocarbon rent is inseparable from the prior mobilisation and control of the economic surplus itself. The foreign ownership of hydrocarbons, in so far as it entails an independent autonomous strategy of management based on the maximisation of profit share accruing to foreign capital - dominated mainly by French interests - soon became incompatible with the ambitions of the Algerian State whose economic project required a complete re assessment of the relation of production prevailing in the oil industry. The new ruling class was also aware that "Algeria must not content itself with the role of raw material exporter. She must attempt to domestically transform them and initiate on their behalf a process of industrialisation of the entire country. National riches must primarily be used for the enlargement of national economic potentialities" (43). As to the mode of exploitation of hydrocarbons based on the pursuit of co-operation with oil companies, Algeria opted for a policy which went far beyond that of a simple royalties receiver. Between 1967 and 1970 the first measures towards nationalisation were introduced. The assets thus acquired went to the Algerian oil company SONATRACH (44). Until 1970 only non-French interests were affected by these measures (45). Among those hit were BP, ESSO, MOBIL, PHILIPS, SOFRAPEL, AMIF etc. The February 1971

nationalisations extended to French interests. The system of concessions was abolished altogether. All gas fields and distribution networks became state property (46). The rate at which the operating surface area (the concessions) of foreign companies shrank is an interesting insight into the new power of SONATRACH itself (47). By 1971 the power of SONATRACH was absolute since 98% of the oil surface area was directly under its control. At an output level, the structure of oil production reveals even further the power of the new policy makers. As soon as 1972 the relation between foreign companies & SONATRACH was completely inverted: by 1972 the production share held by foreign companies had been reduced to the level of SONATRACH's in 1966 (48). After 1971 both hydrocarbon production (up to 77%), and its distribution were under direct State control. The adoption by Algeria of the majority rule of shareholding (51% of assets under Algeria's control and 49% under foreign control), provided the new basis whereby the new policy of joint venture with foreign companies was initiated (49). The new conditions under which the Algerian dominant class was able to define the new terms of control over oil rent in relation to other classes and particularly *vis-à-vis* foreign capital, coincided with the pursuit of its economic project. The realisation of the ASD required therefore the development of the hydrocarbon sector under the direct ownership rule of the Algerian dominant class.

2. The role of capital accumulation in the domestic industrial sector.

Outside the scope of capital accumulation taking place immediately within the hydrocarbons sector, the promotion of the domestic industrial sector was seen as the ultimate purpose of capital accumulation proper (50). As seen earlier the share of these industries amounted to 47% in 1967/69, 55% in 1970/73 and 53% in 1974/77 of all industrial investments. The internal distribution of such industrial investments by category of industry gives in turn the following structure.

Table II. 10: Structure of industrial investment excluding hydrocarbons (U: millions of AD & %).

	1967/69	1970/73	1974/77	1967/77
Capital goods industries	1,457 (51%)	7,101 (73%)	22,730 (71%)	31,288 (69%)
machine tool industries (mechanical & electrical industries)	600	1,937	6,235	8,772
Intermediate goods industries (energy, steel, metallurgy, construction materials industry)	857	5,164	16,495	22,516
Consumer goods industries (textile, chemical products leather, food industries etc.)	1,051 (37%)	2,265 (23%)	8,626 (27%)	12,944 (29%)
Extractive industries	326 (12%)	2,70 (3%)	478 (2%)	1,074 (2%)
Total	2,834	9,638	32,834	45,306

Source: Ch. Palloix. Ibid.

For the entire period of the three plans, capital goods industries absorbed 69% of industrial investment and consumer goods 29%, the remaining industrial investment (nearly 2%), went to mining industries. The emphasis was clearly on the sector of means of production. But the internal structure of this sector reveals its own stress. The usual emphasis placed on the capital sector derived its rationale from the role of the sub-sector producing machine-tools, i.e. the ability of certain types of machines to produce other machines. It is in fact this particular sub-sector which determines the entire path of development of the capital goods sector. In the mode of industrialisation of Algeria such a priority was in fact inverted (but only if one looks at the distribution of industrial investment). Between 1966 and 1977 machine-tools industries only accounted for 28% of total investment accruing to capital goods industries. With such an investment structure consumer goods industries absorbed a much larger fraction of investments than machine-tools industries: AD 12,944 million against AD 8,772 million.

At an overall level, the policy of industrial investment mainly favoured the hydrocarbons sector (47% of all industrial investments). Such a structure clearly reduces therefore the degree of contribution of the machine-tool industry in the overall gross fixed capital formation (51) whether in the capital goods sector or in the

consumer goods sector. The absence of emphasis on the machine-tool industry appears to be the paradoxical result of a strategy whose claimed objective was inspired by the complete integration of its industrial sector. In turn the nature of the relation existing between the hydrocarbons sector and the intermediate goods sector does not by itself promote either machine-tool industries or consumer goods industries. What is more important is the fact that the persistence of a heavy structure of investment captured mainly by the hydrocarbons sector raises the question of the line of demarcation between the development of hydrocarbons and that of the industrial sector (so far the rate of integration between the hydrocarbons sector and the intermediate goods sector does not go beyond the supply of the latter to the former of sheets of iron for reservoirs and pipeline tubes). "The acceleration of fixed capital formation in the hydrocarbon sector ... witnesses also the difficulty to ensure an international valorisation of hydrocarbons compatible with the setting up of an industrial system endowed with an internal balance - particularly when this domestic industrial productive system has the tendency to report upon the hydrocarbon sector's difficulties in increasing production - accelerating in this manner the rate of investment of the hydrocarbons sector already very much solicited by international capital" (52). Eventually such an issue will depend on the net foreign earnings contribution of hydrocarbons, i.e. the level of economic surplus net of the hydrocarbons own needs for fixed capital formation. As to the ability of the capital goods sector to operate with a relative autonomy *vis-à-vis* the hydrocarbons sector, it remains to be seen. So far the very initiation of industrialisation depended in its entirety on the export proceeds of hydrocarbons. From the development above three main characteristics of the ASD can be expounded.

It is a strategy based on a double imbalance: an imbalance between agriculture and industry in favour of the latter, and an imbalance favouring the development of hydrocarbons at the expense of the capital goods sector in general and machine-tools industries in particular. Such a double imbalance therefore makes the ASD neither a

proper agricultural policy nor an industrial strategy (understood in the sense of a promotion based on the development of the core of capital goods industries: machine-tool industries).

The ASD is characterised by an intensive formation of fixed capital: In value terms and at current prices, the volume of investment resources which were channelled to creating the necessary productive capacity of the nascent industry, was cumulatively increased with ever greater intensity. Between the first and the second plan, the yearly amount of resources involved were multiplied by two, while between the second and the third plan such resources was multiplied by nearly four. The amount of investment involved was as follows: AD 2 Billion/year during the 3 Year-Plan, AD 4 Billion/year during the First Four Year Plan, AD 15 Billion/year during the Second Four Year Plan.

The investment effort was the result of one single entity: the Algerian State capitalist class. Be it in its elaboration, conception or realisation, the ASD was in fact the exclusive expression of the dominant class and that of its industrialist faction. At no stage whatsoever in the elaboration of the overall policy of "development" was there found the slightest contribution by those social groups or classes outside the structure of power. Both in its conception and execution the "strategy of development" was eminently authoritarian. The implication of the economic role of the State (or rather the classes that control its apparatus), through its conception of development, bears a direct relation to the terms under which was shaped the mode of organisation of the agricultural sphere of production. The role of the State questions therefore the very finality of its economic project: a development for whom? To be able to address such issues requires in the first place an analysis of the conditions of realisation of the State mode of capital accumulation.

C.The condition of realisation of the Algerian strategy of development.

What is meant by "the conditions" of realisation of the Algerian policy of investment is not only the sets of factors in the absence of which the developmental projects would

have been impossible, but also the actual conditions which accompanied and which therefore were part of the implementation process of the policy itself (53). In the first set of conditions we can distinguish two main factors: the social conditions associated with the emergence and development of state bureaucratic capitalism and the financial conditions which made possible the pursuit of the policy under the form of a constant reliance on external debt (this is the capitalist nature of accumulation in so far as it presupposes unlimited needs for expansion). In the second set of conditions the terms under which the policy of "development" was pursued, were the growth of unemployment on the one hand and the integration of the Algerian economy in the world market on the other (54). For methodological reasons, the assessment of the conditions of realisation of the mode of capital accumulation will be approached under two main headings: the external and the internal conditions of realisation.

a. The external conditions of realisation of the mode of capital accumulation.

1. The financial conditions of accumulation.

If hydrocarbons absorb a significant share of the investment fund, its contribution to the financing of such investments is also important. The entire process of capital accumulation itself revolves strictly around the concept of oil rent seen both as a means and as an end. As a means, the growth of oil rent provides for the necessary expansion of the hydrocarbons sector itself, as an end, the hydrocarbons sector provides therefore for the net oil rent which can be used outside its sector. The relation between the expansion of the hydrocarbons sector and the industrial sector tends to acquire a residual status. In other words, since the expansion of the hydrocarbons sector depends entirely on the world market and not on the rest of the domestic economy (55), in the last analysis it is the world market which determines the volume of oil rent which can be invested in the industrial sector once the conditions of accumulation in the hydrocarbons sector are already being met. For total capital accumulation to proceed at a given fixed level (56), so far no automatic

mechanisms can ensure that the development of capital accumulation within the hydrocarbons sector can guarantee in the same course of event a parallel increase of the net oil rent for investment in other sectors. As it happened, the extension of capital accumulation has been constantly associated with an increasing reliance on external sources of financing, directly in the form of foreign borrowing, and indirectly as a result of the export earnings associated with oil rent.

Table II. 11: The financing sources of capital accumulation (U: AD millions).

	1967/69	1970/73	1974/77
1.Foreign borrowing	840 (9%)	5,768 (23%)	26,160 (29%)
2.Budgetary savings	-248 (-26%)	2,286 (9%)	29,839 (33%)
3.Domestic savings	6,250 (66%)	8,596 (35%)	10,938 (12%)
4.Monetary financing	2,600 (27%)	8,041 (32%)	23,340 (26%)
Total	9,442	24,694	90,273

Source: Ch. Palloix. Ibid. (57).

From the above one can assess the specific conditions under which the reproduction of capital has been taking place. If one looks at items 3 & 4, which reflect the strictly internal sources of finance, their contribution fell from 93% during 1967/69 to 67% during 1970/73 and 38% during 1974/77. As far as direct external financing (i.e. the external debt of Algeria) is concerned, its volume increased from 23% during the first Four Year Plan to 29% during the Second Four Year Plan. The real contribution of the external source of financing, direct & indirect, was however far greater than that suggested by foreign borrowing alone. Since the 1970s the budgetary saving has become *de facto* the main contributor, through oil taxation, of the financing of budgetary investment. As such, budgetary saving clearly appears as an indirect source of external financing. The overall contribution of the external sources of financing to the reproduction of fixed capital formation has considerably increased from 32% during 1970/73 to 62% during 1974/77. What this doubling of the external contribution of the sources of financing tends to show is that "the formation of gross fixed capital which was underway during the Triennial Plan and the First Quadriennial Plan was not able to develop during the second plan an autonomous

internal capacity of financing on the basis of the productive system which was being set up" (58). More fundamentally, what the analysis of the different sources of financing is about is the fact that the mobilisation of the economic surplus in the Algerian economic formation is taking place mainly on an exogenous basis. In other words the reproduction of the productive system which was being set up tends to depend on a capital whose circulation is taking place mainly in the world capitalist market. The organic link existing between productive capital and circulating capital is split between two distinct types of economic formations: the Algerian economic formation which determines the needs in terms of productive capital (fixed capital and labour), and the developed capitalist economic formations which produce the constituent elements of such a capital, mainly fixed capital, but increasingly also labour in the form of wage goods imports (59). To put the matter differently, one can say that the conditions of production of capital are being divorced from its conditions of reproduction.

The second element which enters into the increasing emphasis on the external source of financing is the net foreign earning contribution of the hydrocarbons sector itself.

Table II. 12: The net foreign earning contribution of the hydrocarbon sector (U: U.S \$ Billions) (60).

	1974	1975	1976	1977	1978
<u>Resources of the sector</u>					
-Export proceeds	3.9	3.9	4.6	5.5	5.8
-Foreign borrowing	0.9	1.0	1.2	1.3	2.2
Total resources (I)	4.8	4.9	5.8	6.8	8
<u>Expenditures of the sector</u>					
-Investment	0.8	1.2	1.9	2.9	2.6
-Debt servicing	0.3	0.2	0.3	0.4	0.6
Total expenditure (II)	1.2	1.4	2.2	3.3	3.2
Net foreign earnings of the sector (I- II).	3.6	3.5	3.6	3.5	4.8

Source: M. Mekideche in "Le secteur des hydrocarbures" OPU. Algiers 1983 p. 324. The U.N. Yearbook of International Trade Statistics. International Financial Statistics Yearbook 1983.IMF. C.Palloix. Ibid.

Despite favourable circumstances (the period under investigation underwent the largest oil price increase), the net purchasing power of hydrocarbons, once its own

financial needs for accumulation and expansion purposes were satisfied, had not substantially increased. With the exception of 1978 it had in fact been constant. It is therefore this inability on the part of hydrocarbons to substantially raise the net foreign earning balance which explains the increased reliance of capital accumulation on foreign borrowing (if one considers food imports as part of an incompressible level of consumption - which is the case since food imports are essentially wage goods - then the real net balance of foreign earnings for capital accumulation is even further reduced). In the absence of an ability to generate a source of financing from within, and one independent from hydrocarbons, foreign earnings remain the main restriction to the present mode of accumulation. In the meantime, the reliance on external sources of financing, both as a condition and as an end to this capital accumulation, becomes in itself a characteristic of the ASD.

2.The cost of external financing.

The reliance on the developed capitalist economies for the pursuit of capital accumulation has involved, from the point of view of economic surplus, different forms. In what follows our purpose will centre on an assessment of such conditions, whenever statistically possible, and on their significance *vis-à-vis* the overall policy of industrialisation. One immediate measure of such a levy on economic surplus is the problem of debt servicing in general and the magnitude of interests on loans in particular (61). Interests paid in relation to the level of foreign borrowing and to the terms under which such loans are contracted, are an interesting indicator. The sheer weight of external borrowing has steadily been increasing over the years.

Table II. 13: External debt of Algeria (U: US \$ millions and %).

Year	Debts outstanding un-disbursed	2. Debt outstanding disbursed	3.share of 2 in GNP
1967	1,401	493	14%
1968	1,505	599	15%
1969	1,747	741	16%
1970	1,986	970	19%
1971	2,141	1,365	26%
1972	2,694	1,488	21%
1974	6,002	3,304	26%
1976	11,975	5,846	35%
1977	14,976	8,316	42%
1978	20,057	12,659	50%
1979	23,842	15,078	39%
1980	23,187	15,078	39%
1981	21,685	14,392	35%
1982	20,309	13,953	33%
1983	18,858	12,984	28%
1984	16,812	12,211	25%
1985	18,364	13,664	25%

Source: Computed on the basis of the following sources: World Debt Tables: External debt of developing countries. 1982/83 Edition, the World Bank. T. Benhouria "L'économie de l'Algérie" Maspero. Paris. 1980. World Tables 1976 and 1986-87.

From a relatively low level (14%) in 1967, the magnitude of the external debt rocketed to 35% of GNP in 1981. From US \$ 493 million it increased to US \$ 14 Billion. Per head, the external debt increased from \$1.3 per person in 1967 to about \$760 per person in 1981. It is clear that the enlarged opportunities for capital accumulation opened up by international capital have been significant (the persistent appropriation by hydrocarbons of the majority of investment raise, on the other hand, the question of the fate of development of the capital goods sector particularly since the development of an export sector cannot be prevented from developing its own autonomy *vis-à-vis* the domestic economy). In terms of external resources the weight of external borrowing can be measured through the magnitude of the total debt service.

Table II. 14: Total debt service (U= US \$ million).

Year	Principal repayment	Interest repayment	Total debt service (T.D.S)	T.D.S/Exports (%)
1970	42.6	32.9	9.7	4.0%
1971	67.7	51.6	16.1	8.0%
1972	189.0	138.0	51.0	14.6%
1974	709.9	491.4	218.5	16.6%
1976	773.5	433.0	340.5	15.5%
1977	1,027.8	639.7	382.2	17.6%
1978	1,451.0	893.1	558.5	23.6%
1979	2,690.0	1,537.2	1,153.4	27.0%
1980	3,710.0	2,405.0	1,306.0	24.0%
1981	3,879.7	2,399.0	1,480.7	27.4%
1982	2,888.6	1,368.2	4,256.7	39.6%
1983	3,230.2	1,220.6	4,450.8	32.7%
1984	3,268.7	1,290.0	4,458.8	33.6%
1985	3,256.3	1,297.3	4,583.6	33.3%

Source: Computed on the basis of the World Bank Debt Tables and the International Financial Statistics Yearbook 1983 (the contribution of IDA is non existent).

From the 1970s the proportion of export earnings devoted to servicing the debt has steadily increased and during the last 3 years it exceeded 25%. Besides servicing and particularly the magnitude of interests paid (the contribution of international institutions has been kept to an insignificant minimum with less than 2% of the total borrowing: see on this point Appendix All.1), other forms of deductions of economic surplus exist. The sophisticated technology which accompanies the setting up of industrial units involves the extra cost of technical assistance (according to T. Benhouria - Op. Cit. p. 322 - in 1972 Algeria disbursed, above the wages paid in the local currency, for the technical assistance in the industrial sector alone - about 20,000 persons - the equivalent of half the remittances of the 80,000 Algerians emigrants during the same year), as well as for all sorts of services provided by foreign consultancies (studies, expertise etc.).

The economic integration of Algeria in the world capitalist economy through its exports, imports and the organisation of its economy, involves compliance with the working of the usual international trade mechanisms: the mechanisms of transfer prices operated between the main firms and their subsidiaries, the working of adverse

terms of trades *vis-à-vis* the periphery, the price of patents, the overcosting of industrial projects (some of the initial value of certain industrial projects was increased by 100%, 200% and even more) etc. All these mechanisms and their combination draw heavily on the level of actual economic surplus available for investment purposes. If the reducing effects of such mechanisms are hard to assess, taking them into consideration raises however at least the identification of the different channels through which international trade operates its multiform reductions on the level of economic surplus at the disposal of society, even if from the point of the capitalist mode of development of Algeria such forms of consumption of economic surplus are seen as unavoidable conditions of capital accumulation.

b.The internal conditions of realisation of capital accumulation.

1. Unemployment and mode of accumulation.

In its essence the ASD appears as an extraordinary accumulation of machines seen as the backbone of industrialisation and therefore of development (62). It was such a mechanistic and linear concept of industrialisation which therefore divorced *de facto* the objective of employment from industrialisation. In other words employment was being taken care of by the automatic creative effects associated with the intensive accumulation of gross fixed capital formation conducted on the basis of the most sophisticated techniques. As C.Palloix put it "the industrialist's thesis acts as if the accelerated formation of fixed capital which would only depend on a 'good' (I) transfer of technology, would lead *ipso facto* to the immediate adaptation of the new labour force to the system of machines, or to the immediate transformation of individual workers into a 'collective worker'. But the collective worker is a 'social machine' which can neither be assembled nor for that matter dismantled at will" (63). The contradiction of the systematic adoption of the most sophisticated technology and the existence of a fundamentally unskilled labour force is certainly the most important feature of the labour condition of the ASD (64). Such a contradiction contains at least two fundamental implications: the strategy of investment contains the mechanisms of

an income distribution imbalance between the agricultural sector and the industrial urban sector (65), and an imbalanced income distribution, within the labour force in favour of skilled labour, and between labour and capital (as a result of the capitalistic nature of the labour process). In other words, the income distribution imbalance between social groups polarised between the owners of the means of production (i.e. all social groups which derive their economic and political power from the State property of the means of production) and the large faction of unskilled workers (66). Whatever the apparent motives and justifications that are put forward by the proponents of the technological option of the strategy (and therefore of the strategy itself), the overall policy of industrialisation is to be assessed in the last analysis in terms of the class interests it promotes and the social contradictions it generates in the pursuit of such interests. The identification of such interests will thus in turn reveal the orientation given to the development of the productive forces. In this respect the ASD only inaugurates the post-colonial conditions under which the social product is being redistributed between the different classes or how the new dominant class inaugurates the new socio-economic conditions of its own reproduction.

1.1.The sectoral distribution of employment.

The diffusion of employment attached to the development of industrial projects clearly indicated its concentration in the non-agricultural sphere of production.

Table II. 15: Distribution of employment creation between the different spheres of production during the different development plans (U:1,000).

Spheres of production	1967/69 plan	1970/73 plan	1974/77 plan	1978/82 period	Total labour creation
Agriculture	60 (41%)	-60 (-52%)	97 (14%)	-10 (-2)	86 5%
Industry	38 (26%)	84 (29%)	130 (19%)	93 (16%)	345 20%
Public work & construction	11 (7%)	108 (37%)	209 (31%)	153 (27%)	481 29%
Transport	13 (9%)	21 (7%)	35 (5%)	28 (5%)	95 5%
Trade & services		21 (7%)	75 (11%)	112 (20%)	221 13%
Administration	12 (8%)	116 (40%)	131 (19%)	187 (33%)	441 27%
Total	145 (100)	289 (100)	677 (100)	563 (100)	1,674 100
percentage	(8%)	(17%)	(40%)	(33%)	(100)

Source: "Séries Statistiques". 1967-82. MPAT. Direction Générale des Statistiques. 1984. Op. Cit. p. 7 (negative figures relate to the actual fall in employment).

In order to conduct a thorough analysis of the employment aspect of the ASD, we need first to assess the evolution of the employment situation since 1967.

Table II. 16: Employment situation between 1967 and 1982 (U: 1,000).

spheres of production	Employment situation in 1967		Employment situation in 1982	
Agriculture	874	50 %	960	28 %
Industry	1,237	8 %	468	13 %
Public works construction	71	4 %	552	16 %
Transports	53	3 %	148	4 %
Trade & services	321	18 %	542	16 %
Administration	306	17 %	752	22 %
Total	1,748	100	3,422	100

Source: Op. Cit.

Between 1967 and 1982, the overall level of employment was increased by about twofold. 95% (about 1.6 million) of total employment creation during this period took place outside the agricultural sector. With a mere 5% employment increase over a period of 15 years, or an insignificant increase of the order of 0.3 % per year, the agricultural population had to content itself with rural migration to release population pressure estimated at a minimum of 3% per annum. Given the colonial history of rural

migration, it can be said that this phenomenon was further intensified by the present mode of accumulation. As such there is a clear continuity from the view-point of agricultural development, between two apparently different policies of development. It is also to be noted that most employment creations during the post-independence period within the rural areas concerned mainly services (trade, transport etc.) and not necessarily the direct agricultural sphere of production (67). Moreover, whenever employment opportunities were increased such as during the Three Year Plan, such jobs opportunities were simply linked to short term project works (replanting of forest, public work projects). The drastic fall by 52% of the number of agricultural jobs during the First Four Year plan is clear evidence of the volatility of agricultural job creation. The highest employment creation (40%) took place during the sole Second Four Year Plan. With the exception of the First Three Year Plan however, the percentage increase of industrial employment has not been consistently among the highest rises. In fact the share of industrial employment has been decreasing since the First Four Year Plan: 29% during 1970/73, 19% during 1974/77, 16% during 1978/82. For the entire period 1967/82 industrial jobs only accounted for 20% of total job creation.

In contrast to this sector which absorbs the majority of total investments, the sector of Public Works & Construction employed 29% of the working labour force. The most striking feature of a strategy of development which is eminently industrial is the proportion of its workforce employed in services and particularly administration. With 40% of its work force in services, the Algerian economy displayed in its early stages a characteristic which paradoxically is to be found mainly in much more industrially advanced countries. In such circumstances it is indeed expected to find in the early stages of mobilisation of economic surplus, in order to increase the productive capacity of society, a high proportion of labour directly employed in productive activities. A relatively industrially backward economy endowed with a relatively developed structure of employment is what epitomises best the overall

employment picture of present day Algeria. In essence however this inadequacy is in itself a reflection of the mode of management of the interests of the dominant class: the bureaucratic management of the social labour process requiring increased reliance on a veritable army of civil servants capable of administratively controlling every aspect of the process of production and circulation of capital in the entire sphere of state property - and even beyond, into the realm of civil society at large. To quote R. Tlemcani on the same matter one can add that "this complex task [the state management of peripheral capitalist development] can only be done by the bureaucracy as the personification of capital in post-colonial society" (68). Independently of the rationale behind the present structure of employment (69) and the nature of job creation, the question of the extent of such employment creation in relation to social requirements on the one hand, and the nature of such increases in relation to income distribution on the other remains.

1.2. Employment creation and labour market.

The demographic characteristics of the Algerian population are at the centre of the problem of job requirements (70). From the point of view of its structure, the Algerian population is young. It is also a population with one of the highest rates of growth: above 3%. Given the demographic characteristics of such a population, and the adoption of the different scenarios of computation (see Appendix All.2), the ASD satisfies the objective of labour requirements only under the restrictive assumption of excluding half the active population (the female population) from the labour market. In the framework of hypothesis I, the impact of the ASD has not even been capable of offsetting the natural increase of the potential active labour force. In absolute terms the fraction of the population which is theoretically out of work has not been reduced though in relative terms the theoretical rate of unemployment has been brought down from 63% in 1966 to 58% in 1982 (such findings are correlated by a recent publication, based on different sources, by R. Tlemcani who concludes "it can clearly be inferred that the state policy [i.e. of capital accumulation] has virtually marginalised two thirds of the total labour force" (71).

Table II. 17: Evolution of the rate of unemployment (U: 1,000).

	1966	1967	1969	1973	1978	1979	1980	1981	1982
1.Total labour force	4,700	4,868	5,217	5,992	7,185	7,425	7,686	7,986	8,239
2. Total employment creation	1,725	1,748	1,893	2,182	2,859	3,018	3,153	3,280	3,422
3. Total unemployment	2,975	3,120	3,324	3,810	4,326	4,407	4,533	4,706	4,817
4. Rate of unemployment	63%	64%	64%	63%	60%	59%	59%	59%	58%

Source: Séries Statistiques. Op. Cit.

The magnitude of job requirements has meant that an increased proportion of the population had to "export" itself for work to Europe and particularly France with an intensity never experienced before. After a colonisation which lasted 132 years, the number of emigrants during the year of official political independence (1962) was 200,000. In 1968 the number reached 249,000 and in 1975, 850,000 (72). Thus, at a time when Algeria embarked on its "strategy of development" it contributed in the space of seven years to increasing the level of emigration to a stage never reached before during the entire colonial period (in the 1970s "Algerian workers accounted for nearly two-third of all workers from the third world employed in France" (73). The intensity of the phenomenon hastened by the new mode of capital accumulation can only be assessed in terms of the hastening of the dissolution of the traditional peasant agriculture. In terms of agricultural population, the concentration of job creations in the urban centres has necessarily meant an acceleration of the economic mechanisms of rural migration. The yearly number of rural migrants who left the countryside for urban centres rapidly increased: 7,000 during 1966/68, 40,000 during 1968/70, 80,000 during 1970/73 (74), 130,000 during 1973/77 (75). The growth of such a rural exodus which partly expressed the symptoms of an agricultural crisis with deep colonial roots, is also the expression of a continuity: the extension of capitalist relations of production promoted by the "new" mode of accumulation brought about by the ASD. From that aspect, the speeding up of rural migration which affected both subsistence and modern farming, skilled and unskilled labour alike, the destruction through appropriation by industry of agricultural resources such as land, water, the devalorisation of agricultural work etc. are all part of the same conditions under which

the mode of development of the productive forces was realised in their urban configuration (76).

1.3. Capital accumulation and income distribution.

In terms of wealth distribution the Algerian strategy of development created its own mode of social polarisation. The first dominant aspect of income distribution is its extreme imbalance between agricultural and non-agricultural sectors.

Table II. 18 Sectoral distribution of income and population (U: %).

Year	Agricultural Population	sector Income	Non-agricultural Population	sector Income
1967	NA	32%	NA	68%
1969	NA	28%	NA	72%
1973	43%	15%	53%	84%
1974	45%	16%	55%	84%
1975	44%	15%	56%	84%
1976	43%	16%	57%	84%
1977	41%	15%	59%	85%

Source: A. Benachenhou "L'exode rural en Algérie" quoted by Ch. Bernard, Op. Cit. p. 761. For the period 1967/69: M. Raffinot & P. Jacquemot, Op. Cit. p. 199 (only for the income distribution aspect).

From 1967 onwards the distribution of total income between the two main economic sectors has taken place on an extremely polarised basis in favour of non-agricultural activities. If as early as this date the share of income distributed was in favour of non-agricultural activities, the evidence is that the State strategy of industrial development only deepened, through its implications, the already existing income distribution imbalance. Translated in terms of distribution by income level the sectoral imbalance gives place to an even deeper social differentiation, the sign of a further evidence of the unequal terms of control over the economic surplus in both spheres of social production.

Table II. 19: Income distribution during the First Four Year Plan.

Average monthly income		Population (U = 1,000)				Total income (U = AD million)			
U= AD		1969	%	1973	%	1969	%	1973	%
Low income classes									
1	400	5,650	43%	5,940	39%	2,200	18%	2,680	17%
2	700	3,200	24%	3,640	24%	2,240	18%	2,700	17%
Middle income classes									
3	1,200	2,495	19%	2,810	19%	2,820	23%	3,800	24.5%
High income classes									
4	2,200	1,575	12%	2,175	14%	3,440	28%	4,890	31.5%
5	3,500	350	3%	435	3%	1,300	11%	1,430	9.0%
Total		13,200	100	15,000	100	12,000	100	15,000	100

Source: M. Raffinot & P. Jacquemot. Op. Cit. p. 200.

If all income classes were divided into two different categories, the overall income distribution takes place on the following inverted basis. While the top one-third of the population controls about 2/3 of total income, the largest fraction (2/3) of the population only has access to one-third of total income (77). A high level of unemployment on the one hand, and a wide imbalanced income distribution on the other are the conditions under which was satisfied the labour dimension of the Algerian strategy of industrialisation. This type of development, which reflects the particular mode of consumption of economic surplus, determines its own mode of control over social product, i.e. a mode of income distribution in favour of the representatives of capital encrusted in the apparatus of the state. The industrial production process being based on a high organic composition of capital using the most sophisticated and advanced technologies implies that any increase in productivity will accrue to the owners of the means of production as well as to the most skilled workers upon whom is based the actual management of the sophisticated industrial units. The extent of unemployment, the prevalence of unskilled labour, the weakness of trade unions etc. are in turn the necessary mechanisms whose working ensures a form of income concentration at the expense of labour.

2.The State and capital accumulation.

From its start the Algerian policy of accumulation has been closely associated with the State economic policy. As the most important job provider and investor, with an exclusive monopoly over the banking, monetary and financial institutions or as the regulator of prices, production, wage-rates etc., the influence of the State is overwhelming. "There is no sector of the reproduction of social life where the state does not intervene either directly or indirectly. It acts as law maker, investor, planner, importer, exporter, manager, owner, judge and police officer. The state in post-colonial policy is everything" (78). The strength of this State, based on a prominent public sector, was derived from its ability to control and allocate a sizeable economic surplus, at the level of the industrial and hydrocarbons sectors as well as at the level of the largest fraction of the agricultural sector. The question of the State use of this economic surplus or the mode of consumption of the economic surplus, confronts "the awkward question of the function of the State in a class society. Implicit in most liberal models is the assumption that the State is a neutral and benevolent arbiter attempting to maximise a social welfare function" (79), a sort of "disembodied force standing above civil society" (80). As the institutional backbone of any class society, the State is however neither immune nor independent from those social forces which operate from within its machinery. In order to assess the economic policy of the State it becomes therefore unavoidable to ask: in whose class interests does the State function?

From an historical perspective the Algerian State is a colonial creation. As such the colonial state, both in its apparatus and in its function, was shaped according to the dominant interests of the metropolitan bourgeoisie based on the necessary subordination of the domestic classes (particularly the peasantry) in order to realise the objective of the colonial mode of accumulation based on land appropriation, surplus extraction, the development of an export agriculture and a mining economy, all of which consolidating the benefits of the colonists and the French metropolis. From that perspective the fostering of the capitalist relations of production in colonial Algeria was inseparable from the use to which the different factions of the French bourgeoisie

put the State and its apparatus, i.e. the realisation of their hegemony as an economic and political class over other Algerian classes. It was also during this colonial period that the bureaucratic and administrative development of the State apparatus acquired its most extensive form. The political independence of Algeria has necessarily led to the emergence of a post-colonial State (81), a power structure unaltered in its administrative apparatus but occupied by a new dominant class, the petty bourgeoisie under the hegemonic leadership of the military group (the property of a dominant class is derived from its ability to ensure that its own economic reproduction and that of society at large coincide).

As far as the relation between the State and the domestic classes is concerned, the transformation of the colonial State was not pursued with the aim of the dissolution of the relations of class domination associated with the working of the apparatus of the colonial State. As into many African experiences "the movement which brought [the ruling State members] to power was not structured in a way which permitted control over the leaders by certain classes nor was it committed to giving political power to particular classes" (82). Given the political agenda of the warring factions for the political independence of Algeria from France, "their task was not to dismantle the inherited state apparatus but to strengthen it and [in the logic of their political vision] ensure its dominance in the emerging class struggle against peasants and workers" (83).

In the aftermath of the political independence of Algeria, the coming to power of a new class with its different factions, has necessarily meant that it enjoyed a relative autonomy *vis-à-vis* the domestic classes. In the absence of a powerful domestic bourgeoisie - the colonial development of capitalism in Algeria has not allowed for more than a subordinated junior form of an indigenous bourgeoisie (84) - and a developed class of workers (here too the mode of colonisation of Algeria produced rather a class in formation than a class in an achieved form). "The numerically small proletariat is drowned in the immensity of the pauperised masses, from which it

comes, to which it remains attached and with which it is often an integral part" (85). The existence of well developed administrative machinery as a means of managing the expanding state sector confers from the start a bureaucratic characteristic of such a mode of development. Rather than being "a committee for managing the common affairs of the whole bourgeoisie" (86) as would have been the case for a fully matured domestic bourgeoisie, and in the absence of the latter, the post-colonial State becomes itself a bourgeoisie in the making. Rather than directly promoting the private sector (and by private sector one refers to that whose property is not based on "the producers' own labour" but "on the employment of the labour of others" (87)), the state sector becomes in fact partly its substitute. The development of capitalism is not conducted directly via the private sector but rather indirectly through the promotion and expansion of the State bureaucratic sector (88). Rather than being in opposition to the private capitalist sector, the expansion of the public sector is also that of the private sector. The use of subsidies, the supply of cheap industrial inputs, tax rebates and/or exemption and different forms of tolerated tax evasions, the supply of a cheap labour force through the control of the price of wage goods, favourable terms of access to credit etc. are among the main channels through which a transfer of value from the "public" sector to the fast growing private capitalist sector is operated (89). The public sector becomes the ante-chamber of the development of the private capitalist sector. The class character of such an economic project is obviously blurred by the use of a populist ideology presenting the State as the State above society, the Algerian society as a classless society of universal harmonies, and the capitalist strategy as the strategy of "national development" (90). While the State property of the means of production placed the core mechanisms of economic surplus control within the hands of the new State, it was certainly the provision of the substantial oil revenues which in fact contributed to a large extent to disguise the class character of the new regime. By allowing for the alleviation of the rate of surplus extraction from the domestic sphere of production, the provision of an important oil rent was able to defuse the class tensions which would have unavoidably occurred (substantial oil revenues did not

therefore expose the social reproduction of the different domestic classes, and therefore of capital, to the conventional conflicting generation of economic surplus). As such oil rent directly contributed to providing the economic basis for the relatively conflict-free reproduction of the different classes and particularly the hegemonic faction of the dominant class: the state bureaucratic bourgeoisie.

The mode of development of State bureaucratic capitalism implies by its nature that the classical mechanisms of regulation of the capitalist system such as price determination, the free circulation of commodities, labour, capital, the condition of profit determination etc. are necessarily altered through State's mediation. As T. Benhouria sums up the issue "the categories which were the driving forces of capitalist growth, competition, the equalisation of the rates of profit through the free circulation of capitals, goods and men, cease to operate within state bureaucratic capitalism" (91).

The bureaucratised state capital is thwarted in its expansion through the centralisation of the mechanisms of market regulation. However "degenerated" this form of capitalist development may appear, it neither can be dissociated from the emergence of a domestic bourgeoisie - in formation, nor from the development of an 'increased urban proletariat and an increasingly differentiated peasantry dominated by landlessness and increasing poverty.

CONCLUSION.

The mode of accumulation which has been pursued by Algeria was essentially based on industrialisation. The achievement of such an objective has been accompanied by an increasing "diversion" of actual economic surplus, particularly in its oil rent form, to benefit of the hydrocarbon export sector (the main provider of foreign earnings as well as the guarantor of foreign borrowing) with the result that the net share of financial external resources accruing to the other sectors of the economy has tended to remain constant. As such the hydrocarbons sector appears not only as the main provider of oil rent but also as the main consumer of such an oil rent. The path between the centre of accumulation in the export sector and the centre of accumulation in the other domestic sectors remains so far determined only once the needs for capital formation within the export sector are already been met.

The emphasis of the strategy of development on heavy industries did not result in developing the sector most identified with the capital goods sector: the machine-tools sector. Given the present distribution of sectoral investment, this sector receives in fact a smaller share of resources than the consumer goods sector. After the export sector, the single most important sector remains the sector producing intermediate goods. Though defined as a model of "industrialising industries" the Algerian strategy of development appears neither as a model based on capital goods industries as such, due to the subordination of the machine tools industries *vis-à-vis* intermediate goods industries, nor as a model based on consumer industries as such due to the subordination of the latter by the intermediate goods industries. The pre-eminence of the hydrocarbons sector both in the overall gross formation of fixed capital and in foreign earnings is in fact what characterises best a mode of international labour specialisation still based on the promotion and development of an economy based on mono-exports (however strategic the importance of the exportable product may be).

In its external mode of realisation the ASD was accompanied by a deep integration in

the world capitalist economy through both the conditions of reproduction of the elements of capital (the objective conditions, i.e. the technological reproduction of fixed capital, as well as the subjective conditions, i.e. the reproduction of the labour force through the imports of wage goods), and the development of its export sector (92). The very valorisation of hydrocarbons meant also that, because of the oil self-sufficiency of East-European countries, Algeria's partners are essentially capitalist partners (93). Whether as supplier or importer, Algeria remains dominated by its capitalist partners. The mode of orientation of Algeria's development in relation to the world capitalist system is, from that perspective, inseparable from the class nature of the post-colonial State which anchored the Algerian economy in the world economy on the basis of the hydrocarbons sector which also served as the basis for domestic capital accumulation and its organically corresponding class articulation.

Throughout the planned period the nature of industrial investment has been pursued using the most sophisticated techniques available. Despite the extraordinary development of industrial investment and the increase in the absolute level of employment, persistent inadequacies still remain however between the level and nature of employment opportunities and the characteristics of the labour market dominated by a high proportion of a young labour force on the one hand and a low proportion of skilled manpower on the other. The concentration of industrial investment in urban areas has also meant that the policy of development remained throughout a non-agricultural policy. Agriculture which supported the majority of the population before the emergence of the oil industry entered into a decline after the initiation of the ASD (see part III). As such the characteristics of an essentially agrarian society, as Algeria showed in the 1960s, did not serve as the direct objective of development. Its promotion was in fact postponed to the aftermath of an industrialised Algeria. The role of the peasantry was therefore directly subordinated to the objective of industrialisation whose process was in the hands of the State bureaucratic bourgeoisie and that of its different factional interests.

As a result of the relative ease with which the state was able to raise its exchange earning surpluses, the rapid promotion of Algeria's industrial policy inaugurated at the same time - and this despite its attenuated effect on employment creation - an extension of wage relations on a scale which, when expressed in an increased food demand (particularly urban), soon exhausted the capacities of domestic agriculture altogether. The management of food demand imposed itself with a force of compulsion and emerged as an integral part of industrialisation itself. The necessity to meeting the new urban food demand became a precondition of capital itself: through the reproduction of its subjective condition (the physiological preservation of labour power), but also a reproduction most compatible with its own valorisation (the production of subsistence goods compatible with the production of the value of labour power at its lowest cost possible). Imposed by the very rationality of capital (once given the length of a day's work, the determination of the value of labour power is also at the same time that of surplus labour itself with the result that for a given level of technical progress or a given organic composition of capital, the value of labour power is inversely related to the value of surplus labour), the emergence of cheap food/cheap labour/low wages policy soon acquired the characteristics of ^{a policy} *à part entière*. As the embodiment of a mode of regulation of labour power, the supply of cheap wage foods was obtained in two manners: the state promotion of capitalist organisation of agricultural production and direct state intervention based on cheap food imports and a pricing policy. The extent to which such objectives were to be achieved and the type of contradictions that the pursuit of cheap labour policy necessarily create are dealt with consecutively in Part III and Part IV.

NOTES

1-Lazreg, M. Op. Cit. p. XIV.

2-Such conflicts in fact were ever present in the different political and military bodies which were part of the unfolding of the process which was to lead to the actual war of liberation. The eminence of the political independence only led to an intensification of such conflicts. The actual occurrence of such an independence resulted in many instances of overt military action against opponents. (on this point see M. Lazreg op. cit)]

3- Op. Cit. p. 84.

It can also be added that such an objective could be said to be shared by most groups and classes. What however makes the petty-bourgeoisie elements more sensitive to such an objective is precisely their overwhelming presence within the most powerful body of power: The army.

4-Such an exclusion of foreign interests does not by itself mean the exclusion of capital in the sense of a social relation of production. What one ought to see beyond such nationalisations is merely the Algerian state claim for political and economic hegemony over the domestic conditions of capital accumulation.

5-The small class of private capitalists was offered substantial incentives (profit tax exemptions during the first five years of their investment, generous terms of access to loans etc.) in the setting up of consumer goods industries and services.

6-See following section.

7-In 1976 the two main national enterprises SONATRACH for hydrocarbons and SNS for steel employed about 30% of the total industrial work force.

8-The Algerian Dinar, with AD= 18 Milligrammes of gold. Until August, 1969, the AD was at par with the French Franc.

9-If so far conventional approaches have interested themselves with capital formation as such, i.e. through its different magnitudes and its rates of growth, our approach however differs in the sense that it is based on the study of the social forces which are

an integral part of the actual process of accumulation, i.e. the class interests which are presupposed in the process of development and which develop along such a process. For the sake of convenience we will indifferently refer to this accumulation policy under the terms of either the "Algerian Strategy of Development" ASD or the "Algerian Model of Development" AMD. Our compliance with such commonly used labels remains however subject to a reserve in so far as their reference to "development" is more filled with an ideological content than it may at first sight appears, i.e. a notion of development "handled as an ostensibly neutral, non-class process..." to coin Pandeli Glavanis, North Africa Edited by R. Lawless & A. Findley. Croom Helm. New York. 1984. p. 120.

10-What such an integration entails is that the interpretation of the policies of development of such countries (of which Algeria is our particular concern) proceeds mainly from impact that the oil industry produces on the penetration and expansion of capitalist relations.

11-This dominant form of surplus-value does not exclude the generation of absolute surplus-value based on different forms of lengthening of working time.

12-Renfrew, Christie Why does capital need energy? in Oil & class struggle Edited by p. Nore & T. Tuner. Zed press. 1980. p. 13.

13-In order to compare different carbon-bearing sources of energy such as oil, gas, coal etc., a conversion factor is used whereby 1 coal unit (C.U)= 1kg of coal containing 7,000 calories = 0.7 kg of crude oil for the same calorie content.

14-The comment of the following oil expert is very clear on the point. "It would be quite correct to assume that, as a particular use-value form of energy, crude oil displays considerable advantages compared to coal in all respects, from its immediate production to its transformation into thermal energy. In addition, the by-products of crude oil find numerous uses in all sectors of industry; but to get rid of the residues of coal requires additional costs". Massarat, M. The energy crisis: the struggle to redistribute surplus profitbid p. 34.

15-The nature of the conflicts and contradictions that such a distribution entails

within countries is assessed in our case from the point of view of the study of the Algerian economic formation according to its own class specificities. The extension of such findings to other oil exporting countries cannot therefore go beyond similarities and broad characterisations.

16-Disturbances as a result of the imbalance between supply and demand are not taken into account here. Price variations above and below value are assumed to cancel out each other so that prices are equal to value.

17-The price of production = costs of production + average profit. By definition therefore, a market price is a price of production.

18-Only when land is subsumed under landed property. At this stage we are not assuming its existence, at this stage we are not interested in issues pertaining to the mode of distribution of surplus-profit yet.

19-Marx, M. Capital. Volume III, Laurance & Wishard, London 1974. p. 644, quoted by Massarat, M. Ibid. p. 28.

20-This situation is in fact similar to that of the manufacturing sphere of production itself whereby the highest labour productivity reaps a surplus profit above the general price of production in the rest of the sphere. But if the dynamic of capital here is not restricted by the generalisation of a higher labour productivity within the entire sphere, in the extractive sphere however, limits are set to the competition of capital for the increase in labour productivity.

21-It goes without saying that if demand decreases, the first category of capital to go, would be that which can only aim for average profit. The production of a substitute (e.g. nuclear energy) by determining the new conditions of production will impose its sanctions on those producing in the lowest range of labour productivity. The perspective of a full application of the law of value without the generation of a differential rent in the sphere of energy production can only be conceived when the nuclear energy becomes the only form of energy production, i.e. in the case whereby the production of energy or more precisely its manufacturing is freed from its natural constraints.

22-Ibid p. 35

23-Ibid. p. 36. It is also worth mentioning that without subsidies, the capitalist organisation of European coal production would not have been possible without a certain form of 'socialisation of losses either directly through the nationalisation of the coal mines as in France & Britain or indirectly in the form of subsidies to the industry" (Ibid p. 35).The most favourable natural conditions of coal production are located in the USA.

24-The different forms of ownership of oil have not been a once and for all fixed forms. From a historical standpoint the feudal property of land (and the class nature of ownership) ought to be distinguished from its capitalist form of ownership.

25-When an open colonisation is the rule, as was the case of Algeria until 1962, such an alliance is simply not needed and capital rules by military means. what becomes an issue however is the impact of the diffusion of the capitalist relations (through international capital), the destruction of the feudal mode of production and the genesis of new social classes. The destruction of subsistence farming remains up to now the testimony of the penetration of capital in the agricultural sphere of production.

26-Posted prices are different from consumer prices. Posted prices are the prices at which oil companies buy oil from exporting countries. Cf. on this point the interesting book by Chevalier, M. Le Nouvel Enjeu Pétrolier. Calman-Levy, 1973

27-Nore, p. Ibid. p, 71.

28-Compared to the level of surplus profit in 1960, the 1974 price increase allowed the OPEC country members to multiply their share of profit by 47 while the increase was only 10 fold for the oil companies and the importing countries. But in all cases the absolute level of profit increased for all partners.

29-The share of surplus profit from oil accruing to each OPEC member country and Algeria in particular has not been attempted as such at this level.The main purpose so far of the analysis was mainly to highlight: a. through the international distribution of oil surplus-profit the origin of the source of capital accumulation potentially available to all providing countries, b. the conditions under which the redistribution of

surplus profit has been possible, i.e. the development of capitalism (however uneven and incomplete) in the oil exporting countries. As far as the latter point is concerned one ought to point out that the development of capitalism in the periphery in general needs not necessarily be associated with an open liberal ideology. In so many instances of national development" or 'socialising' ideologies, it is becoming, more and more difficult to dissociate State interests and private interests. Generally speaking the state does not always produce an ideology which is a direct reflection of the class interests it promotes. It rather always wants to appear as the state above class interests. But we know that the state can only be conceived as the bearer of the class that invests its structure and its apparatus.

30-Perroux, p. quoted by De Bernis in Approaches de quelques conditions pour l'industrialisation des pays sous développés. Undated paper of a conference held in Algiers University between 1973 and 1974. Algiers. p. 4.

31-Ibid. p. 10

32-Ibid. De Bernis rightly distinguishes between countries in the process of industrialisation and industrialised countries. His preference for the former formulation, unlike the latter, does not imply any idea of an achieved process. Industrialisation is therefore rightly seen as a self generating movement which ends up affecting all aspects of economic sectors as well as of society itself.

33-"Linkage is reduced to the fact that an input of the newly established industry is an output of the to-be created industry or vice-versa". Hirshman, A. The strategy of economic development. Yale University, 1969, p. 103. h^c x

Forward linkage effects on the other hand are defined as the output utilisation of every activity that does not by its nature cater exclusively for final demand.

34-De Bernis Ibid. p. 12.

35-P. Salama and P. Tissier L'industrialisation dans le sous-développement". Petite Collection Maspero. Paris, 1982, p. 82.

It goes without saying that the alternative open within a strategy of IS can be based on the development of an export sector based on consumer goods promotion.

36-Such a distinction does not by its nature imply that a state public sector is not controlled by private interests. The legal form of ownership of the means of production does not necessarily reflect the economic control over the social product. The development of capitalism is consistent with a variety of property forms.

37-When the issue of development is involved the central question to be addressed is always: development for whom? or in other words to what specific social needs is harnessed the development of the productive forces?

38-The assessment of the level of private investment is not ordinarily available in the current economic official publications. The sheer economic weight of public investment has literally dwarfed if not simply eliminated any estimation of private investment from current literature. The percentage share of the private sector in the domestic value-added reflects by contrast and *a contrario* the overwhelming weight of the public sector: 1967: 67%, 1969: 54%, 1971: 23%, 1973: 18%.

39-Other sources such as A. Benachenhou in "Forces sociales et accumulation du capital" and M. Raffinot & P. Jacquemot in Le capitalism d'Etat Algérien give a much lower percentage rate of industrial investment. The former source gives 55% while the latter 52%. The only advantage in using the Palloix, Ch. source is that it is the latest of all (1980). The problem of accuracy and even of reliability of data pertaining to Algeria in general ought not be under-estimated.

40-A. Benachenhou. Forces Sociales et accumulation du capital au Maghreb. Annuaire de l'Afrique du Nord, 1973, p. 327.

41-Tayeb Said Ahmed. Le développement industriel de l'Algérie. Edition Anthropos, 1981, p. 37.

42-This is so only in so far as the hydrocarbons sector is compared to each individual section of the capital goods sector and consumer goods sector. If however the distinction is being made only in terms of the hydrocarbons sector *vrs* the rest of the individual sector, then the percentage share of industrial investment during the 1967/77 period is 47% for the former and 53% for the latter.

43-Henri Madelin Pétrole et politique en Méditerranée occidentale. A. Collin Paris.

1973. p. 162.

44-Created by the end of 1963, initially SONATRACH was conceived as a company in charge of the transportation of hydrocarbons and their marketing. In later years its prerogatives extended to research, exploration, production, processing, petrochemical activities etc.

45-French oil interests were preserved due to the existence of the 1965 agreement of cooperation between Algeria and France. In a return for a regime of concessions covering an area of 180,000 km² rich of oil, a guaranteed supply to meet France domestic oil needs and a set of advantageous fiscal measures (including levels of posted prices lower than those charged to oil companies operating in other oil producing countries) granted to French companies, the 1965 agreement granted Algeria an outlet for her export (mainly made up of wine), the absorption of her emigrants in the French economy and the perspective of a financial aid (for a period of 5 years France promised an annual credit of N.F.F 200 million with a grant element of N.F.F 40 million, the rest disburseable over a period of 20 years with a rate of interest of 3%).

46-Known gas reserves in 1971 ranked Algeria amongst the 4th largest reserve holder after the USSR, the USA and Iran. See K. Ammour, L. Leucate and J.J. Moulin. La voie Algérienne de développement. F.Maspero. Paris 1974. p. 46.).

47-See Appendix All.3.

48-See Appendix All.4.

49-On the basis of the new policy of bilateral deals prospecting operations which can last several years are at the entire charge of the foreign partner. It is only in the case of the discovery of commercially interesting fields that the previous expenses of prospecting are shared between Sonatrach and the prospecting company.

50-The question of the path between the accumulation within the hydrocarbons sector and within the industrial sector raises important issues. In particular the central question is: does the development of hydrocarbons guarantee by its nature an automatic development of the internalised gross fixed capital formation ? Some attempts have been advanced in the present piece of research.

51-This explains why the proportion of machinery in total imports remained at a constantly high level: 23% (1967), 31% (1969), 36% (1972), 43% (1974), 45% (1978), 36% (1980) and 38% (1981). See UN Yearbook of international Trade & statistics.

52-Palloix, Ch. Ibid. pp. 541/542.

53-The notion of "condition" is preferred to that of the "effect" of the strategy. The shortcoming of an analysis based on the notion of "effects" is that effects tend to suggest consequences associated with a strategy while the notion of "conditions of realisation" are therefore an integral part of the policy of accumulation while "effects" are simply derived consequences out of such an accumulation process.

54-In fact these two factors, rather than being mere by-products or a result of the policy which is being pursued, are in fact an intimate structural component of the mode of capital accumulation itself: intensive accumulation of the most advanced capital using techniques of production against the background of a relatively backward economy.

55-For hydrocarbons to rest on the domestic economy, it is essential that the development of hydrocarbons is geared exclusively to the domestic market, i.e. that the role of the international market is reduced to an insignificant aspect. But this is clearly not the terms under which is geared the valorisation of national natural resources.

56-Due to the determinant weight of the world capitalist market in the realisation of the overall condition of capital accumulation, the problem of sectoral proportionality necessary acquires a political determination.

57-Budgetary saving is "the excess of definitive budgetary resources issued from taxation above the amount of operating budget and investment budget" Palloix, Ch. Ibid. p. 545.

From the 1970s onwards oil taxation has become greater than the budgetary investment, so that the net positive budgetary saving reflects the fact that the budgetary investment is financed from oil taxation, i.e. a taxation which depends not only on the volume of exports but on the international oil prices. From the 1970s

onwards budgetary savings reflects therefore the contribution of oil taxation. This can therefore be considered as an indirect external source of financing. (*the negative value of budgetary savings means in fact that it is ordinary taxation which financed budgetary investment).

58-Ibid. p. 550.

59-As be seen, the reproduction of the labour force has tended to be more and more dependent on the import of wage goods.

60-Due to the impossibility of having access to the proportion of foreign borrowing exclusive to the needs of the hydrocarbons sector, the calculation of the net foreign earning contribution of the sector cannot therefore be expanded beyond 1978 and 1974.

61-This is not to suggest that Algeria must not pay any interest on contracted loans. The shortcoming associated with the magnitude of interests paid is that it does not take into account the conditions under which the payments are being met. When a country borrows, it tends to underestimate the future resources which will be at its disposal when it has to pay back. The present inability of most underdeveloped countries to meet their obligation of payment is a clear evidence of such a contradiction.

62-It is interesting to note that such a linear conception of industrialisation conveys its own paradigms: the intensive accumulation of fixed capital guarantees the condition of a progressive generalisation of industries, industrialisation guarantees a balanced development between industry and agriculture, the setting up industries guarantees the formation of a class of workers capable of its management etc.

63- Op. Cit. p. 533.

64-The rationale behind the option for the use of advanced technologies is given to us by De Bernis. Three main reasons are put forward: a. A country is no less dependent when using backward than modern technologies, b. Modern technologies are the only capable ones for endowing a country with a guaranteed position in the international division of labour, c. Modern technologies do not require a great amount of skilled

labour force.

65-The ASD contains from that standpoint a specialisation of the economic activity (which in effect is urban by essence) as the localisation of investments is distributed between three main growth poles which happen as well to be the three main urban centres of Algeria. From that perspective, the localisation of investment becomes a powerful reinforcing economic mechanism of rural migration. In this context the relation between towns and countryside becomes a relation inseparable from the mode of accumulation.

66-Such an income distribution is the mirror image of the ASD which is in essence a class project of development of the productive forces on the basis of the State ownership of the means of production. In the last analysis, the ASD is no more than the social project of the dominant class, a project curiously identified with the technical achievement of the developed capitalist economies, in other words an ideal of capitalist development.

67-R. Tlemcani. *State and Revolution in Algeria*. Westpoint Press. London. 1986. p. 10.

68-See on this point Ch. Bernard. *l'emploi a la ville et l'emploi a la campagne, une complémentarité compromise en Algérie*. Monde En Développement. N°36.1981. p.67.

69-Though this structure coincides with the interests of the dominant class and in this sense it is eminently rationale from the point of view of such class interests, there remain however the question of the cost of such a structure in relation to the question of the effective use of economic surplus.

70-Since the mode of capital accumulation is being pursued according to the interests of the dominant class and not those of the working class, it goes without saying that such demographic requirement (as seen earlier) are not part of the requirement of the mode of development of the productive forces. It is therefore capital which determines its needs in accordance with its own expansion rather than the population determining its own capital needs. As one can see, such a mode of determination is eminently capitalist in nature (to have an idea of the *challenge* that a young population sets in

terms of a goal to be reached by capital accumulation, in 1985 the comparative percentage of the population below age 15 compares as follows: Algeria 45%, Morocco 41%, Egypt 40%, Developing countries 37%, Developed countries 22%. The Economist. 26 November-2 December 1988).

It is also worth mentioning that in 1983 the proportion of technicians, engineers and executives represented 5.6% of the total employed population while those employed without skill represented 47.4%.

71-As total increments of labour creation relate in fact to labour creation independently of the sex (and of age also), the inclusion of the effectively employed female population is rendered unavoidable. In fact such a method of proceeding is also part of the official method of calculation employed by Algerian statisticians. (The magnitude of the incremental female population is computed from 1977 to 1982 (because of a lack of data) on the basis of an extrapolation of the pattern of female employment between 1966- 90,500- and 1977- 139,000).

72-With the exception of the 1975 figure derived from T. Benhouria. L'économie de l'Algérie. Maspero. Paris. 1980 p. 372, the data are derived from B. Dellouci & M.Mehani L'émigration Algérienne in La population de l'Algérie. CICRED. 1974. pp. 88/90.

73-R. Tlemcani. State and revolution in Algeria. Westview Press Boulder Colorado & Zed press London. 1986. p. 168.

74-Philip, A. President of the OECD Development centre in his forward to Trebous, M. book: Migration and development: the case of Algeria. Development centre of the OECD. Paris 1970. p. 7.

75- A. Prenant Essai d'évaluation et d'interprétation de la croissance urbaine en Algérie: 1966-1974. March 1976. Quoted by A. Benachenhou. L'exode rural en Algérie. Algiers. 1979. p. 11.

76-Rapport general du deuxième plan quadriennal quoted by A. Benachenhou Op. Cit. p. 10.

77-"The urban fact is reinforced by industrialisation and the induced direct and

indirect effects can be already felt in the field of employment. The development of commerce and exchange, the organisation of administrative, financial and political functions reinforce the role of the towns as a pole of development of the regional economy". C. Bardinet La répartition géographique de la population Algérienne in 'La population de l'Algérie' Op. Cit. p. 78.

78-The real extent of income distribution is however much more unequal than that suggested by the above table. The unproductive modes of consumption of the economic surplus (i.e. the diversion away from productive investments) by the different sections of the dominant classes involve other forms of consumption (and difficult to evaluate) which cannot be identified with the observed levels of monetary incomes. Such modes of consumption involve free access to housing, to ownership of a car, to frequent free travel abroad, to food supply, to the exclusive use of certain infrastructures and services (health care, holiday facility etc.). The extent of the gap between the bottom and top income classes can be much wider if its calculation involves the play of different bonuses. When this is the case wage gaps of the order of 1 to 20 in the agricultural sector and 1 to 64 in the non-agricultural sector are not uncommon. See on this particular point T. Benhouria Op. Cit. p. 323 and , M. and Jacquemot, p. Op. Cit. p. 200.

78-K. Griffin and , A.R. Khan. Poverty in the third world: Ugly facts and fancy models. World Development. Volume N° 6. p. 302.

79-R. Tlemcani Op. Cit. p. 13.

80-First, Ruth. Libya: class and State in an oil economy in "Oil and class struggle". Op. Cit. Footnote No 7. p. 140.

81-Von Freyhold, Michaela. The post-colonial state and its Tanzanian version. Review of African Political Economy. No 8. January-April 1977. p. 87.

82-The notion of post-colonial state is borrowed from Hamza Alavi. The state in post-colonial societies: Pakistan and Bangladesh. New Left Review. N° 74. July-August 1982.

83-Ibid.

84-Ibid.

85-M.L. Benhassine and L. Boukra. Le processus de formation de du secteur d'Etat en Algérie in Revue Algérienne des Sciences Juridiques, Economiques et Politiques". OPU. Algiers. 1982. p. 224.

86-K. Marx and F. Engels. Communist manifesto". Progress Publisher. 1965. p. 43.

87-K. Marx Capital. Volume One. Lawrence & Wishard. Progress Publishers. 1974. p. 716.

88-The state ownership of the means of production does not by itself necessarily contradict capitalist production. The valorisation of capital does not require an exclusively individual form of ownership. The development of the wage earning system and the absence of control of the means of production by the workers are all what is required to guarantee such a valorisation.

89-Such methods of promotion of the private sector are not indiscriminate and in many instances they depend on the particular regional, ethnic, family links or connections that are established between the private entrepreneurs and the representatives of the State bureaucracy. Very often however the frontiers between private and state interests are blurred due to the dual status assumed by many state representatives who harness their political power to the consolidation of their interests in the private sector. In that sense the private bourgeoisie is only the hidden screen of the state bourgeoisie. As pointed out by Hugh Roberts "the development of state capitalism has entailed the massive expansion of the administrative apparatus of the state but has also ... permitted a substantial development of private enterprise" The Algerian Bureaucracy. Review of African Political Economy. N°24. May/August 1982. p. 52.

90-For a critical assessment of the notion of 'development' see A. Phillips. The concept of development. Review of African Political Economy. N° 8. January-April 1977: 7-20.

91-T. Benhouria Op. Cit. p. 432.

92-The technological basis of its industrialisation originated mainly from the most

advanced capitalist economies: essentially the USA and Western Europe. The share of total imports originating from the USA, the EEC countries and other European capitalist countries was 73% in 1967, 76% in 1970, 71% in 1975, 68% in 1977, 80% in 1980 and 78% in 1983.

93-In 1967, 91% of Algeria's export were to North America & Western Europe; for the following years the proportions were 83% in 1970, 88% in 1975, 94% in 1977, 87% in 1981 and 93% in 1983.

PART III

THE UNFOLDING OF THE AGRARIAN QUESTION.

Introduction

The conditions under which was obtained the supply of wage goods under the requirement of cheap labour were behind most of the agrarian transformations initiated by the post-colonial state. Such transformations came about through two main processes: the emergence of the experience of "autogestion" or "self-management" during the 1960s and the programme of land reform during the 1970s. The experience of agrarian self-management concerned essentially the new conditions under which the ex-colonial sector was re-appropriated from the colonists and "re-organised". In essence the experience developed more on the level of ideology than that of the actual relations of production. If formally the idea of self-management referred to the spontaneous conditions under which the work force already employed on the colonial estates carried on the process of production without their French landlords, the fundamental relations of production upon which were organised estates (such as the organisation of the technical division of labour, the wage earning system, the supporting structures, the mode of remuneration, etc.) remained largely unchallenged by the new conditions. If formally the agricultural workers, now organised in *managing committees*, were in charge of the abandoned (and/or nationalised) colonial farms, the real owners of the means of production, i.e. those who effectively control the relations of production, and who now ceased to exist under the form of a multitude of individual landowners, had now become the new state through its multi-form institutional embodiments: the marketing boards, the credit institutions, the Ministry of Agriculture, etc. The transition of Algeria from the colonial period to the independence period has not resulted in any major alteration in the relations of production upon which the development of the colonial sector was so far based. What

was altered as a result of the substitution of the multitude of European farmers by one new category of landlords - the post-colonial state - was essentially the terms under which the appropriation of agricultural surplus between France and Algeria was redefined to the benefit of the Algerian state and its class representatives.

In so far as the rural poor (the landless, the near landless, the sharecroppers, the temporary workers, the unemployed all of whom located on the strata of poor and part of the middle peasantry) were concerned, the transformation of the colonial estates into "self-managed" farms had not brought about any major change in terms of job opportunities through a process of land redistribution (the exception remaining the creation of the war veterans co-operatives which by definition benefited the middle peasantry rather than the small or poor peasantry). The reproduction through state reappropriation, of the colonial sector and not its destruction through a radical land reform in favour of the poor peasantry, prevented therefore any significant transformation of the agricultural structures away from the inherited capitalist path of development. With the prohibition of any peasant occupation of the colonial land (particularly on cereal land) as early as December 1962 (1), the agrarian tendency which had been nurtured under the overwhelming weight of the peasantry within the Popular Army of Liberation during the last years of the armed struggle for independence, was brought to an end with the state officialisation of "self-management". The direct involvement of state institutions in the running of the ex-colonial sector conferred to the post-colonial state all direct and indirect means of control over the ex-colonial farms. The mode of management of the ex-colonial estates had become a "*Junker road*" of agrarian development but without Junkers (2). The extension, development and the consolidation of state property over this fraction of the agricultural sector dominated the whole of the first decade of post-independent Algeria. From its early development the experience of "self-management" had meant that the "the re-assessment of agriculture in accordance with the real situation of the peasantry in the marginal sectors was definitively ignored" (3). Between the issue of an agrarian reform in favour of the peasantry, and the preservation of the ex-colonial farms, the

latter imposed itself on the agenda of the new ruling class. The concept of land reform which eventually prevailed was defined only after the interiorisation of the colonial methods of management and organisation had been well assimilated and reproduced and the industrial option became the centrality of the economic policy of the new state. In this context the conception of agrarian transformations which were to be inaugurated bore the stamp of an essentially industrialist and urban conception of development. X

In contradistinction to the peasant conception of agricultural change which was upheld during the war in the agrarian programme contained in the *Congress of the Soummam* (the Congress of the Soummam, held in the midst of waging war for liberation and political independence by the interior army - as opposed to the external fraction isolated in Tunisia and Morocco - and held on August 20th 1956, envisaged the conception of change in conformity with the hegemony of the peasantry), the new programme of land reform arose out of a different class perception and conception altogether. In its essence the promotion of the programme of "agricultural revolution" (AR) was defined essentially in opposition to the "private" agricultural sector. The implicit assumption behind such a project of agrarian transformations lies, given the *de facto* preservation of the mode of management of the estates, in the extension and diffusion to the rest of the agricultural sector of the mode of organisation already existing in the state agricultural sector proper. As such the main objectives of "agricultural revolution" consisted in the elimination of large properties as well as the nationalisation of absentee landowners. At the outset, the declared aim of the programme of land reform was openly in favour of a *farmer road* to agricultural development. The integration of communal land in the fund of AR also constituted another important characteristic of this programme: the breaking up of all different forms of land property and their fusion into a homogeneous form closer to a capitalist use of the land. The constitution of the new agricultural sector was based on the redistribution of land under a co-operative form for its beneficiaries but with the state remaining the ultimate owner. In view of the limited number of nationalisations (exceptions were particularly high while the proportion of absentee landlords and large properties proved smaller than expected), the bulk of the land integrated in the new sector was

essentially of a communal origin, i.e. land of not particularly high fertility that the commune rented to small and/or landless peasants. In other words, as contradictory as it may at first sight appear, the measures of nationalisation affected the small peasantry which rented such communal land more than the middle and particularly large landowners who did not resort to renting the communal land and who were also able to escape the nationalisation measures using the procedure of exception and/or because of the different methods of concealment (false status of residence for absentee landowners - the urban location of residence of landowners was considered a condition of land nationalisation by the Algerian reformers - the artificial use of joint-ownership for large landowners, etc.). By focusing exclusively on the private sector and on the fraction of land beyond the state agricultural sector of "self-management", the Algerian reformers displaced and inverted the sense of an historical contradiction, that which prevailed and presided over a century of land confiscation and which now finds its embodiment in the substitute of the colonial sector, i.e. the post-colonial state agricultural sector. As such and in so far as the overall unequal distribution of the land goes (one of the *raison d'être* of the agricultural "revolution" was precisely to fight such a land imbalance), "the fundamental inequality does not lie so much between small and large private property, [however relevant such a contradiction may appear, it can however only be so in the absence of any distinction between juridically different sectors, which is far from being the case here] than between the private sector and the self-managed sector. Thus the socialisation (or better the state control), of the ex-colonial sector has not abolished the perennial dis-equilibrium between "a people without land" and "a land without people". It has only, by institutionalising an uncrossable juridical barrier, assigned to this sector definitive limits, bringing thus to an end the process of land confiscation of the "traditional" private sector (which incidentally does not prevent the process of land concentration from being sustained within it)" (4). Through the new conception of agrarian change centered on a contradiction located within the private/traditional sector, and not within the entire agricultural sector, one witnesses that the historical dualism, created under colonial

conditions, is still nurtured and reproduced under the new conditions of AR, and that the programme of land reform which can be identified with the small peasantry as such, i.e. the landless and the near landless, is also ignored. What the programme of AR in fact achieved is an extension of the model of farming prevalent in the "self-managed" sector. As such it has neither been able to absorb and integrate the small peasantry in the economy (the model of state farming, because of its size and the capitalistic nature of its process of production, employs the smallest proportion of the labour force), nor create any significant impact on the rural labour market (the majority of the beneficiaries of AR were already employed). As pointed out by N. Abdi, the programme of land reform has "tended to abolish the peasant condition, not by encouraging its development but by breaking totally away from it" (5). The reproduction of peasant economy obeys *de facto* the rationale of cheap labour/cheap wage through the logic of simple commodity production. To the coloniality created agricultural contrast dominated now by a polarization of a state sector enjoying the highest concentration of the largest fertile land, and a private sector employing the highest proportion of the labour force, a further sector was added with an intermediate profile based on the use of industrial inputs but the least endowed of all in terms of land and land fertility. As a result of the programme of AR, the polarisation within the overall agricultural sector has been maintained and deepened further: on the one hand the state agricultural sector has been augmented by the sector of AR, on the other a more formally "laminated" private sector dominated by middle property but where large private property was formally eliminated.

On the whole, the programme of land reform appears as the consolidation of the extended state capitalist form of ownership of the land while in the "private" agricultural sector its contribution consisted essentially in consolidating the private ownership of the land most compatible with its capitalist use, that is a form of property based on the promotion of the fusion of the category of landowner into the category of capitalist farmer. Populist and socialising in rhetoric, the programme of land transformation also ended up as a compromise for it neither achieved the bourgeois goal of a radical

nationalisation of the land based on the elimination of absolute ground rent and the enhancement of the development of a capitalist agriculture based on the peasantry, nor the Junker road of agricultural development proper (the state acted rather as a condensed substitute for all Junkers). Let us now assess to what extent such transformations were able to meet the objective of capital requirement for cheap wage goods in the different agricultural sectors.

CHAPTER I

THE AGRICULTURAL SELF-MANAGED SECTOR.

Introduction.

The performance of the ex-colonial farms (now ideologically perceived under the label of 'self-management'), cannot be perceived without the prior study of the new conditions under which was operated their management. The main proposition that runs through this chapter is that - as a result of the bureaucratic mode of management of the estate production process (crop organisation, land regrouping, credit policy, labour management, reconstitution of fixed capital, marketing practices, etc.), the promotion of cheap food policy has been achieved with the result of a decreasing, or at best a stagnant production.

Paradoxically enough the history of 'self-management' has been nothing but the progressive hegemonic state control of the ex-colonial farms. As one of the earliest revelations of the class nature of the new power bearers, the status of the ex-colonial farms soon became the focal point of social conflicts. Indeed, as one of the immediate effects following the proclamation of the political independence of Algeria was the massive exodus of the majority of European settlers (about 1 million), the nature of the conflicts concerned mainly the control over the abandoned European assets (the massive exodus was also accompanied, on the part of many settlers, by systematic destruction and/or sabotage of the properties left behind: industrial plants, capital equipment and machinery, houses, etc.). In the context of the 1960s, the European exodus was to trigger two types of problems whose effects were to be felt for the many years to come: The departure of all French settlers also meant the departure of all engineers, doctors, technicians, civil servants, skilled workers, managers, etc. or, in other words, a complete professional vacuum affecting all aspects of the social

organisation of Algeria. After this exodus most economic activities were thus brought to a complete halt. From the viewpoint of their extreme effects such consequences are seen by many as "unparalleled in the history of liberation from colonialism" (6) as they "meant the disappearance of a whole bourgeoisie, [and] of capitalists" (7). The European exodus meant the desertion of over 22,000 farms covering an area of the 2,700,000 ha. A period of total confusion was set in motion. As G. Duprat put it "the vacuum, triggered at the top by the absence of central power and at the bottom by the massive exodus of Europeans, created between the month of July and October 1962 an authentic revolutionary situation" (8). A period of conflict commenced for political power at all levels of Algerian society and particularly in the countryside for the control of abandoned farms. Between 800,000 and 1,000,000 ha (9) - out of 2.7 million ha - went under the direct spontaneous managing authority of the first spontaneous committees of workers, thus giving birth to the first initiation of what was to become the experience of self-management. At that stage all what mattered was more the preservation of the conditions of production on the colonial estates in the absence of their owners rather than the realisation of a different social project based on workers management proper.

On the ground the conflicts which arose between the permanent workers of the ex-colonial farms and the representatives of the new emerging power, the ALN (the National Liberation Army) and the different state representatives, brought to a halt the extension of power of farm workers initiative. The reinforcement of state political power, led by A. Ben Bella after the overthrow of the Provisional Government of the Algerian Republic (GPRA), went along with the creation of BNBV (Bureau National pour la protection des Biens Vaccants: National bureau for the protection of vacant assets), an institution, which by its actions, *de facto* instituted itself as the real manager, as well as the mouthpiece of the abandoned estates, or in short, the substitute for the absent European landowners (until 1963 the central power acted against peasants in defense of the settlers' assets into a view to their coming back). In principle BNBV was to assist the workers in the management of the vacant estates. Most important BNBV

elaborated the famous Decrees of March 1963 (10) which institutionalised the existence of vacant assets:

-18 March, 1963 Decree: It definitively officialised and legalised the existing vacant estates which fell under state protection.

-22 March, 1963 Decree: It set the rules of organisation of self-management under the authority of its organs: the General Assembly, the Workers Council and the Managing Committee.

-28 March, 1963 Decree: It determined the rules of income distribution which in fact amounted to the conditions under which the agricultural product of the estates was to be appropriated through its distribution between: a/ a national investment fund (or to use the official terminology, the contributions to the National Collectivity), which included the contribution to the amortisation fund of the state, the national fund of investment and the national fund for the creation of employment; b/ the wage fund of workers and c/ the constitution of a social fund in the case of any residual in excess of the above contributions. After the publication of the 1963 March Decrees, the BNBV was transformed into BNA.S.S (Bureau National d'Animation du Secteur Socialiste: the national bureau for the animation of the socialist sector). This metamorphosis denoted, at least in principle, the emergence of an ideology openly in favour of a socialist transformation of Algerian agriculture. Following the decrees of March 1963, the first nationalisations of land hit the biggest colonial landlords. Between 150-200 thousand ha were thus acquired (up to that date colonial farms were still legally the property of their French owners. What the March Decrees in effect achieved was simply the notification of their state of vacancy). A further 300,000 ha were secured through the confiscation of the land assets of the CAPER (Caisse d'Accession a la Propriété et a l'Exploitation Rurale: fund for the accession to property and rural farming) (11). On October 1st, 1963 all foreign landlords were finally nationalised (12) without compensation and a year later, on October 4th, 1964 it was the turn of all Algerian landowners who were nationalised on the grounds of their collaboration with France during French colonisation. By this date the land base of the self-managed sector (SMS) was completed (even if it was never to coincide with that of the colonial sector) and its

structure defined.

I. The internal structure of the self-managed sector.

From the start the estates were endowed with specific structures. In principal the SMS functioned on the basis of the following organs:

1-*The General Assembly*, composed of all permanent workers (13) of the self managed farms, is theoretically the sovereign organ in matters concerning farming plans, investment, marketing, labour organisation, etc. It elects the Workers Council (14) which represents it and acts on its behalf.

2-*The Worker Council* decides upon matters of purchase and sales of farm machinery, recruiting and sacking of workers. It adopts the internal regulation of the estate and elects the Managing Committee.

3-*The Managing Committee* was elected among the Workers Council or the General Assembly. It is responsible for the daily management routine of the estate. It is elected for 3 years with a renewal of 1/3 of its members each year.

4. *The President* chairs all meetings of self-management organs. He is the legal representative of the farm. He is in principal assisted by a Director (or a management "chargé") after approval by the Communal Council for the Animation of self-management (15).

5-*The Director* is appointed by the Ministry of Agriculture and represents the state at estate level. He makes sure that the financial and economic operations of the farm are in harmony with the prevailing procedures, he vetoes farming plans and schemes of work whenever they are not in accordance with the objectives of "national planning", he decides on the level of employment for permanent workers, he keeps the accounts of the farm, etc. Given their respective prerogatives, the President and the Director appear as antagonistic holders of the same power. Their position within the estate is a perfect example of a dual authority which is not alien to the nature of the problems encountered in the daily running of the "self-managed" estates and to the subordinated status of the estates *vis-à-vis* the state bodies at large.

From the start, the estates were incorporated into a complex system of bureaucratic

relations of control embracing every single aspect of their organisation. The mode of functioning of the estates reflected a rationality characterised by an open divorce between the juridical representation of the estates and their actual mode of management, but a divorce obscured only as a result of an over ideological representation of self-management in contrast to the actual capitalist relations of production of which the estates were an integral part. In practice, the General Assembly rarely meets. Beyond the handicap of its large and cumbersome size it has hardly operated as the sovereign organ of the estate. The Workers Council, if it exists in most farms, only meets for the election of the Managing Committee (whenever it is possible). The election of the Managing Committee often takes place outside the prerogatives of the General Assembly or of the Workers Council (16). Its nomination is often imposed by ONRA the National Office for the Agricultural Revolution (created in 1963 by the 18th March Decree, ONRA was the first body to be in charge of the management of the SMS), or the FLN (National Liberation Front, the one state Algerian party) which individually try to impose their own members.

Beyond the determination of its internal structure, what however determines the status of the SMS remains by no means its mode of management, or the conditions under which its conditions of production and reproduction proper are operated.

II. The ONRA policy of management of the self-managed sector.

Along with the famous March Decrees, ONRA was created. The objectives given to ONRA were: "To organise the management of the abandoned farms and to realise the government programme of agrarian reform" (17). Until its dissolution, ONRA policy was focused essentially on the first objective alone. From the start the ONRA mission was altogether contradictory and its means of accomplishment remained essentially based on direct intervention. In an attempt to set up all the economic structures necessary for a normal activity of the estates such as credit provision, the supply of farm machinery, the organisation of the marketing network, the accounting control etc., ONRA failed to recreate the economic environment that the colonial sector so far

enjoyed. In an attempt to re-create the same economic environment as that enjoyed by the colonial estates (after the massive exodus of the French in 1962-63 the supporting structures of colonial agriculture were either severely disrupted or simply ceased to exist), ONRA simply substituted itself to the market mechanisms proper with the result that the re-constitution of the supporting structures became more and more equated with the direct intervention of ONRA at all levels of the states. From 1963 onwards, most of ONRA policy was essentially centered on the setting up of specialised bodies for credit, farm equipment and marketing. Being a replica of colonial structures or directly inspired by colonial experience, the inefficiency of these bodies soon showed up in view of the rule of direct administration followed by ONRA. Henceforth, it was ONRA which fixed all economic parameters affecting the self managed farms: labour organisation, wage-rates, distribution of profit, book keeping, the size and structure of the estate, the farming methods, the supply of inputs, the mode of their utilisation and their volume, the type of technology, etc. This singular mode of management (of supposedly "self-managed" estates) resulted in an unprecedented bureaucratic centralism. As the sole decision maker, ONRA organised the entire conditions of production and reproduction of the estates. As such, this policy stretched from the conditions of circulation (and valorisation) of agricultural production to the conditions of production (manpower and capital) of the estates. The different direct levels of intervention of ONRA concerned mainly the marketing boards, the credit policy, the farm machinery policy as well as the actual re-structuration of the estates.

A. The marketing policy of ONRA.

The dominant characteristic of the policy of intervention of ONRA revolved essentially around the conditions of circulation of the agricultural product of the estates. During the first years of independence, and up to 1964, the "self managed estates" (SME) marketed their produce on the private market albeit with increasing interference from the local representatives of the state. The first national marketing agency ONACO (the Algerian Board for Commercialisation created during December, 1962), was established for fruits, vegetables and wine. The creation of ONACO was not however followed by a proper funding in terms of infrastructure endowment. The means at the

disposal of this board being insufficient, ONACO was not materially able to compete with the private brokers and intermediaries. The main activities of the board were rather concentrated exercising monopoly over exports and imports: ONACO was not a specialised marketing board *per se*. With the development of ONRA, the original attributions of ONACO went to two marketing co-operatives responsible for the commercialisation of fruits and vegetables of the SMS. The CORE (Co-operative d'Ecoulement: Marketing co-operative), was responsible for the marketing operations on the domestic market and the CORA (Co-operative de la Reform Agraire: agricultural reform co-operative) the co-operative in charge of the processing and packaging of the products of the SME geared towards exports. In principle the CORAs were administered by a council composed by the presidents of the managing committees but "in practice, they were administered by the state. Their creation was accompanied by the prohibition [for the SME] of free sale and the obligation of delivery of their products to their counters [CORAs]" (18). This authoritarian policy exercised by ONRA *vis-à-vis* the SMS, was not however often accompanied by an efficient clearing away of awaiting harvested crops. Prolonged stocking in the open air often led to the loss of a considerable part of the production which was always supported by the estates. On the whole, crops were badly transported, stocked and processed. Moreover sold crops were not always accompanied by accounting justifications, and payments were never made on the spot (it took many months between the time the farm sells its produce and the moment when it gets the proceeds of the sale). Delays of sold crops, and therefore delays in the payment of wages to the estates, wastes due to the bureaucratic marketing organisation of the estates, etc. were among the main factors that accounted for the bad performance of the estates, the drop in the marketing share of the produce of the estates through official channels, the increase in on farm consumption and the fall of ONRA itself.

The marketing of cereals however escaped the authority of both ONACO and ONRA. OAIC (the Algerian board for cereals), was one of the very first boards to be created. Its scope of intervention integrated the marketing activities covering cereal and dried

vegetable trade on both the domestic and international markets. Unlike the commercialisation of fruits and vegetables, the marketing of cereals was performed on the basis of a integrated state monopoly transcending both the SMS and the private sector.

B. The credit policy.

The inability to meet the regular payment of the workforce, combined with the inability to meet the financial condition of reproduction of the objective conditions of production (replacement of the fixed elements capital as well the necessary intermediate inputs) were among the two main recurrent sources of conflicts which constantly opposed the estates to ONRA. At its immediate level of determination, such financial difficulties of the estates were perceived as the direct results of the state bureaucratic management of the marketing policy. More specifically, such difficulties were the mere expression, perceived through its financial dimension, of the bureaucratic conditions under which the valorisation of the estates produce was realised and which resulted in the constant need for the necessary resources to guarantee the continuity of the production process. This situation soon became dependent on the state policy of credit allocation and on its many contradictions. Up to 1966 the financial authority, in term of agricultural credit, was BCA, the Central Bank of Algeria. The circuit of credit allocation was in turn mediated through a complex network represented by ONRA and its agencies. ONRA obtains a credit budget which it then distributes to CCRA, the Co-operative Centre for Agrarian Reform, which in turn distributes it among the 2, 000 SMEs through its credit section (19). The system of credit allocation functioned with great delays because of conflicts arising between ONRA and BCA in the first place. One of the problems involved was the fact that individual estates were not separately accountable as a result of the absence of the individualised accounting of the estates. At that stage ONRA was unable to identify the performing estates from the non-performing. As such the estates were bureaucratically managed in bulk as if they were homogeneous units undifferentiated in their farming methods, their labour organisation, their land

endowment, their labour productivity, etc. ONRA, which kept the overall accounts of the SME and the global loans received, was therefore unable to give BCA "the justification in advance of the use of the credit" (such justifications were among one of the permanent sources of contention between the two institutions). In the words of the then Minister of Agriculture and also Director of ONRA, the financial responsibilities of BCA went as far as to "contest the farming costs per ha and such or such crop in order to minimise them in relation to the 1962 period, while most input prices fetched a vertiginous increase and manpower costs substantially increased" (20). The outcome of this conflict was that the credits granted to the estates were as erratic as insufficient. In all cases however, the estates supported financially both the institutions which run them according to their authoritarian bureaucratic rules but also bore the inefficiencies which resulted from the policy imposed on them. The hampering effects of bureaucratic rules were also patent in the case of maintenance and farming technology.

C. Farm machinery and the conditions of reproduction of fixed capital.

The SME did not own their own maintenance workshops. The farm machinery section of SAP, which took the name of UMA (union of farm machinery), was in charge of this task. The constitution of UMA resulted from the integration of the equipment pools of CAPER and the Co-operative for the Use of Farm Machinery: CUMA (21). The pooled property of UMA was hired to the SME. But UMA was not always able to satisfy the demands from the estates as credit, spare parts and skilled manpower were scarce. One of the financial difficulties of UMA came from the peculiar situation of the SME themselves. Indeed, as the latter did not directly obtain the proceeds of their sales, it was materially impossible for them to meet, without sometimes considerable delays, the cost of maintenance. This financial insufficiency of the SME was a hindrance which also stood in the way of an adequate replacement of over-used equipment disproportionately requiring more and more maintenance costs.

From the above considerations pertaining to the mode under which the conditions of production and reproduction of the estates were managed, one clearly sees how this period of creation of the supporting structures of the estates led in practice to their

complete domination by the state via its diverse agencies. This domination took different forms depending on the characteristics of the structures themselves (and the political circumstances of the moment). Beyond the details and the characteristics of the policy proper to each supporting structure, the state reappropriation of the colonial ownership of the estates, fulfilled at the same time the essential condition, *e.i.* the control over the economic surplus generated in this specific sphere of production. As a result of the state bureaucratic style of management, the methods of agricultural surplus extraction, were not necessarily among the most efficient or optimal methods. In such a context, the experience of ONRA was a perfect illustration of such inefficient forms of surplus drainage. Up to 1966, the bureaucratically centralised mode of administration of the SMS led to a total economic 'black-out' of the estates. In the absence of a mere accounting individualisation of the farms, it remained impossible for individual farms to know their degree of performance, or for ONRA to allocate resources accordingly. This situation of confusion went on until the introduction of the 1966 reforms.

III. The economic reforms of the self-managed sector.

In the words of the reformers themselves, the aim of the reforms was to fight the policy of bureaucratic centralism which characterised the administration of the SMS. The pledge towards an autonomous management of the estates was accompanied by the dissolution of ONRA in 1966 (the official dissolution of ONRA was not however announced before 22nd February, 1968). From 1966 onwards all ONRA attributions went to MARA, the Ministry of Agriculture and Agricultural reform. Both the supporting structures of the SMS and the internal organisation of the estates themselves were reorganised.

A. The internal restructuring of the estates.

As in the past the reforms originated from outside the estates and at no point were the immediate producers part of the mechanisms of the decision making process. With the 1966 reforms the President was no longer elected by the Managing Committee but by the General Assembly. The choice of candidates was however imposed. The two candidates

for the post of President were chosen by representatives of the FLN Party, the unique official trade union of Algerian workers (UGTA), and the political local authorities APC (Communal Popular Assembly) dominated by landlords and leading business figures. The bureaucratic and authoritarian style of management of the estates remained in its entirety: the power which organised the estates was the same one which "reformed" it. Following the 1966 reforms, the presence and attendance of permanent workers at the General Assembly meetings was made compulsory and "faulty", i.e. absentee, workers were faced with a discharge threat. This authoritarian and bureaucratic style of management, which hardly differed from that of ONRA itself, reflected the extent to which MARA was prepared to go. As put by M. Raffinot and P. Jacquemot, "one could not dream of a more bureaucratic solution to fight the dis-incentiveness of workers for a system which did not even allow them the possibility of translating their will into acts" (22).

The system of economic stimulants and participation to the benefits were reintroduced by the reforms. Permanent workers were granted the right to own a family plot. The workers' right to an accommodation was also recognized but only after satisfying the priority demands of managers and technicians. Under the initiation of the 1966 reforms, workers were at last entitled to social security benefits (such a right however only became effective since 1971), while the Ordinance of February 1975 suppressed the post of Director. This last measure must not however be interpreted to mean much in terms of more autonomy and independence of the estates *vis-à-vis* the state and its specialised bodies. This decision proved that, with the establishment and reinforcement of all mechanisms of state intervention, the post of Director was no longer required. The dependence of the estates *vis-à-vis* the upstream and downstream supporting structures was still as total as before. In terms of the actual mode of management of the estates, the suppression of the post of Director remained purely formal.

B. The reforms of the supporting structures

a. The reorganisation of farm credit.

Considerable progress was achieved with the introduction of the principle of individual accountability of the estates. An accounting and management co-operative CCG (Co-operative de Comptabilite et de Gestion), was created for this purpose. During the harvest of 1966-1967 la caisse Algérienne de Crédit Agricole Mutuel (CACAM), the Algerian Fund for Mutual Agricultural Credit (23) was in charge of the financing of the estates. From 1968 onwards it was BNA (The National Bank of Algeria) and not BCA which became responsible for such operations. CACAM was therefore integrated in the agricultural section of BNA. With these reforms, the management of the estates fell under the direct authority of both MARA and BNA. Henceforth agricultural credits were granted on the basis of the types of crops to be grown (defined by MARA) and labour norm costs per ha (defined by BNA). With the 1966 reform the management of the estates became therefore also directly regulated by financial and banking capital. The role of BCA implies that all norms proper to capital valorisation are now directly and fully applied to the estates.

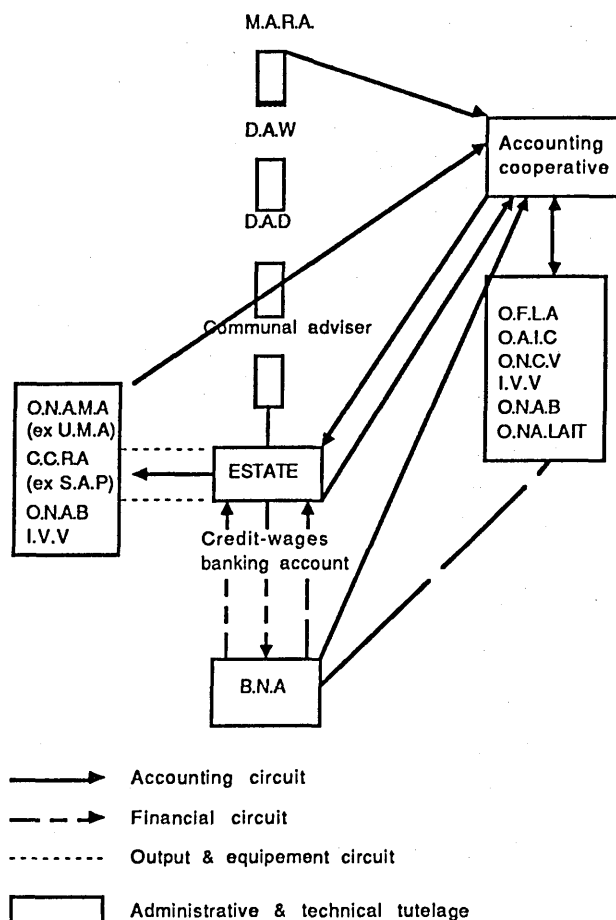
b. The marketing reorganisation.

As a temporary measure (which lasted from 1966 to 1968), COREs and CORAs merged into a new co-operative: UNCAC (*Union des Cooperatives Agricoles de Commercialisation*: Union of Marketing Agricultural Co-operatives). After 1968 a more systematic organisation of state marketing networks was initiated along the policy of generalisation of specialised boards under the aegis of MARA. Six main boards were created during the period. OFLA, the Algerian Marketing Board for Fruit and Vegetables, marketed fruits and vegetables on the domestic and international markets, supplied food industries with the necessary inputs, provided seeds to the producers, etc. ONCV, the National Marketing Board for wine, created in August 1968, buys and processes the wine grapes produced by the SMS. ONALAIT, the National Board for Milk and Dairy Products, was created in December 1969. It is a multipurpose agency and its objectives are to cover the needs of the population in milk and dairy products. ONALAIT collects and

processes the milk produced by the SMS as well as that of the private sector, but within the limits left by the competition of private collectors in so far as the latter sector is concerned. ONAB, the National Board for Animal Feed, was created in April 1969. Its original objective was to import, produce and market feed. Since 1970 its role extended so as to include imports, production and marketing of meat for current consumption. ONAMA, the National Board for Farm Machinery, was in charge of the entire domestic market for the supply of all farm machinery, its marketing and its repair etc. ONAPO, the National Board for Olive Products, was created in December 1969. Its mission was to collect, process and market olives and olive oil. Its suppliers are mainly the private sector which controls 80% of the domestic production and marginally the SMS. The essential characteristic of the boards is that they are all state monopolies. As such their power of control over the estates is absolute. Their prerogatives extended over the control of the entire production process of the SMS in terms of inputs (in terms of their prices, their type and their volume), output prices, crop specialisation, farming methods, determination of the level of remuneration of the labour force, etc. *vis-à-vis* the SMS, these boards appear as the unique intermediaries between the producers and the consumers. Through the administrative price system (agricultural prices are fixed by decree), the state ability to fix the terms of exchange between the estates' production and the non-agricultural production is absolute. In such an environment, the producers control neither the price fixed by the boards nor the amount of proceeds that the boards retain and which make up for their own investment; commission, profits, etc. The build up by state bodies of the necessary mechanisms of control over the agricultural produce of the estates, which continually contributed to achieving the divorce of the direct producers from the condition of realisation of their products, was further continued in 1974 with the extension of the marketing network for fruits and vegetables. Henceforth the estates ceased to supply their produce directly to OFLA, but to a new service co-operative, CAPCS (the Communal Multivalent Agricultural Co-operative of Services). Its role is manifold: It collects the produce of fruits and vegetables from the SME of its commune, sells the production to the retailers which then supply the consumers, and

supplies the COFEL, the Co-operative for Fruits and Vegetables, which heads the CAPCSs of the province), with any surplus left over for the needs of their communal jurisdiction. The inter-regional transactions being forbidden, CAPCS is supplied by the COFEL of its Wilaya, the administrative territorial province, with any surplus of fruits and vegetables from other communes. COFEL centralises the surplus from all CAPCSs attached to its Wilaya and distribute it between the different CAPCSs according to their needs. In turn, when the needs of the Wilaya are not met, the COFEL obtains from OFLA the quantities required. OFLA operates on national and international markets. It centralises the surpluses from all the Wilayate (plural of Wilaya) of Algeria and distributes them according to the deficit of each Wilaya. OFLA in principal proceeds to the necessary imports in case of an overall deficit. OFLA exports fruits and vegetables of the SMS as well as those of the sector of Agrarian reform. OFLA also exports dates from the private sector (for a description of the lengthy and complex state marketing network that regulate the circulation of the estates production, see corresponding chart in Appendix III Figure 1). With the 1974 measures, the overall configuration of the surrounding structures of the SMS, i.e. the upstream and downstream state monopolies surrounding the SMS, shows as follows (24):

Figure 2: The supporting structures of the self-managed estates.



The progressive build up of reforms and institutional changes that have taken place around the management of the ex-colonial sector, achieved at least three main results. An ever increasing state intervention in the running of the SMS, a divorce between the production functions and the distribution functions of the estates and a state take over of the conditions of circulation (and therefore of valorisation) of the product of the estates.

In themselves such results fulfilled the same function which is essentially the extraction of the maximum agricultural surplus that is enabled by the total control of the production process of the SMS. The forms, particularly bureaucratic and parasitic, that such an extraction of economic take, are not however free from generating specific effects upon the very conditions of formation of such a surplus itself.

In what follows, an attempt will be made to assess the extent to which state intervention contributed to increasing the performance of the estates and by way of consequence, the intensity with which such a policy affected the formation of the agricultural produce itself. Our argument is that there has been a negative impact of the performance on the estate as a result of such a state mode of management.

IV. The side effects of the state intervention in agriculture.

The idea of performance can have many meanings. The underlying definition of performance is here referred to in terms of the lines along which the conditions of reproduction, objective as well as subjective, of the estates were actually met. In particular three main situations can be distinguished depending on the mode of use of economic surplus at large. The case of a simple reproduction whereby the conditions of production of labour and capital are reproduced identically to themselves (this situation serving to preserve the level of output at an even and constant level, the amount of investment is therefore just enough to replace capital at its previous level), the case of a reproduction on a larger scale whereby the elements of production are reproduced and replaced at a greater magnitude level (the category of investment involved here increases the productive capacity of the estate), the case of a decreasing and regressive reproduction (here the level of investment is not even enough to keep the level of capital and labour constant). Given such methodological pre-condition, an appreciation of the performance of the estates will, in the last analysis, depend on the mode of utilisation of economic surplus and the conditions under which labour productivity is being increased. The performance of the SMS can be depicted in physical as well as in monetary terms. Given the manipulatory aspect of price fixing by the state, a monetary approach to the performance of the estates is bound to be misleading particularly when it is not complemented by other criteria. The economic performance as measured by quantities produced in relation to the area cultivated, is therefore used as a gross indicator of efficiency. This measure of efficiency implicitly conveys other elements such as the amount of labour used and its skill, the quality and quantity of seeds, the quantity and types of fertilizers used in accordance with the nature of the

land cultivated, the amount of water available per ha, the type of farm machinery, etc.

In what follows we will attempt to assess the main objective conditions, and particularly the condition of their reproduction, upon which the organisation of the agricultural process of production of the estates rests.

A. The land factor of the self-managed sector.

As one of the most important basic objective conditions of production, the study of the land factor of the estates is relevant from the point of view of both a quantitative aspect (size) and a qualitative aspect (structure and fertility). For historical reasons that go back to the colonial formation of the sector (see chapter I), the land of the SMS regroups the best agricultural land of Algeria. As such, such a natural endowment makes the estates sizeable whether in absolute, relative, or real terms. Though in principal the land base of the SMS is that of the colonial sector, discrepancies exist however between them, and the former never coincide with the latter. The 1964 survey (also called the "structures" survey), revealed a land area of 2,300,000 ha for the SMS. The agricultural survey conducted in 1950, i.e. before the independence of Algeria, revealed a cultivated area of 2,700,000 ha for the colonial agricultural sector. Between these dates about 400,000 ha appeared to have disappeared from the SMS land endowment. If one also takes into account the nationalisations of certain Algerian landowners in 1964, which brought to the land asset of the SMS an extra 200,000 ha, the loss to the SMS is of the order of 600,000 ha. It is also proved that during the years immediately prior to the independence of Algeria, many Algerian landowners acquired French properties. Moreover, and according to G. Duprat, "a certain number of [colonial] farms remained within the hands of the Popular National Army and few lands, once used by the settlers in deduction upon the communal land, were not put into self-management" (25). As will be seen at a later stage, the land base of the estates underwent further losses to the benefit of an industry which was located on agricultural and/or irrigated lands (26).

Table III. 1. 1: Farm structure of the SMS (1964-1965).

Structure	Farms Number	%	Size Area (U=1, 000 HA)	%
≤100 ha	106	5 %	5	0.2%
100 ≤ X ≤ 500	479	24%	1597	7.0%
500 ≤ X ≤1, 000	634	32%	520	22.0%
1, 000 ≤ X ≤2, 000	554	28%	856	37.0%
X>2, 000	221	11%	762	33.0%
TOTAL	1, 994	100	2, 302	100

Source: Annuaire Statistique de l'Algérie.

What best characterises the farm units of the SMS is certainly their size, if not their gigantism. The average size of a farm unit is well over 1,000 ha and 40% of the farms have an average area well above the 1,000 ha. If we take a somewhat lower figure (500 ha), 70% (or 93% of the total land of the SMS) of farm units cover an area of well over 500 ha. If by international standards, particularly in relation to agricultural properties in the USA, Western Europe or the USSR, the average size of an estate is large, in practice its structure is not associated with efficiency or economies of scale. The present size of the farms of the SMS was in fact the result of the policy of land regrouping operated by ONRA when it took office in 1963.

B. The policy of land regrouping.

The history of the land structure of the estates was the result of a combination of three factors: The conditions prevailing during their initial constitution between 1962-1963, the policy of land regrouping operated by ONRA and the constitution of the CAAMs (Agricultural Co-operative of War Veterans) in 1965-66. It was in the midst of the heated debate on the status of the colonial estates, and their mode of management, that ONRA undertook a regrouping of the land from 22,000 farms into 3,000 and finally 2,000 estates, that is a reduction in the number of farms of the order of 100 to 9. Such regroupings were conducted without the use of any consistent yardstick. At the beginning, and given the unfolding political project of the emerging power block, there were some unavoidable limiting factors. With the French exodus most documents pertaining to the *cadastral* lay out of the colonial farms had either been taken with

their owners or simply destroyed. The type of information available to ONRA during the regrouping was reduced to the name of the European landlord and the area of his/her property. If all communes had their land register, the latter "referred to the original situation prevailing during the attribution of colonial plots. Depending on the case, it has been kept up to date for only a small number of years and at best until the beginning of the century. In no place was there ever to be found any trace of the phase of free colonisation during which the settlers bought or helped themselves, by any means, to the properties which were recognised "Algerian" by "the Commission of Transaction and Partition" (Commission des Transactions et Partages)" (27). If the absence of an up to date survey which was felt to be a serious constraint in the way of a coherent policy of land regrouping, ONRA however devised no intermediate consistent method to conduct its policy. In most cases improvisation was the rule. Only in a few cases were the workers, with a long working experience on the ex-colonial farms, consulted. The SMS was formed on the basis of estates each composed of several colonial properties. The result which was achieved led to the constitution of farms with scattered plots miles apart. The formation of SMS by simple addition of colonial properties hardly produced homogeneous estates either from the point of view of the physical distribution of land or the crops grown. The concern of ONRA during this process of land concentration seemed to have only been concerned with the scarcity of managers (Directors) to assign to each estate. In many cases the availability of Directors determined the number of constituted farms. In no case was the concentration of a land dictated by the consideration of economies of scale, a better lay out of the plots, a better use of the managing capabilities of the workforce, a more efficient use of the farm machinery, the constitution of farms of one plot, etc. (28). Such a lay out of the estates which was not proper to Mitidja alone - the basis of our reference pertaining to the land restructuring of the estates - (Mitidja, a coastal plain, with the best agricultural land, has been the symbol of both land colonisation and its negation: the emergence of a socialist agriculture), was often the result of a tangling up of the SMF (self-managed farms) among themselves as well as with the privately owned land. Thus, it is not uncommon to find an entire SMF interpolated between a parcel and its own farm, or the

buildings originally attached to an exploitation on another farm, etc. An attempt by the workers of the estates to overcome this land mosaic and proceed to a more sensible land distribution through parcel exchanges, took place but was never encouraged by ONRA. In fact the 1965 events (the military coup that brought to power Colonel H. Boumedienne), were to accelerate the tangling up of the land. When the military came to power after the 1965 coup, the war veteran co-operatives, the CAAMs (29) were created out of the land base of the SMS. The constitution of the CAAMs was a unilateral decision decided for evident political reasons: to calm down the dissatisfied war veterans by giving them the land they initially fought for (30). The CAAMs were constituted with no consultation of the workers of the estates. With the help of the Army (which now calls itself the Popular National Army), between 300 and 400,000 ha were distributed to about 10,000 rural war veterans and between 350 and 400 co-operatives were constituted. Unlike the SME these co-operatives were run with a relative autonomy *vis-à-vis* the authority of the Ministry of Agriculture (31). The formation of the CAAMs was realised with a relative freedom concerning the choice of land, its lay out and the crop it supported. G. Muttin, notes that "when certain parcels which were included in the chosen farm were not convenient because of their low agronomic value, they were left to the estate. On account of this a lot of resentment arose among the workers of self-management who felt discriminated against" (32).

On grounds of the day to day management routine of the estates, the combined effects of the scattered lay out of the estate and the arbitrary amputation as a result of the creation of the CAAMs, entailed an inefficiency in the use of both farm machinery and manpower: the distance between the different plots of lands being high in many cases, the use of farm machinery and manpower become too costly, the supervision of work cumbersome, the profile of skill of the existing manpower incompatible with the size of the farms, etc. Another important characteristic of these estates is that their regrouping failed to take into account the factor of a common cultivation (except for those few farms of one lot). The managing of different crops pertaining to the same farm did not go without technical and organisational difficulties.

In an attempt to lessen and limit the excesses which resulted from the indiscriminate bureaucratic land regrouping instigated by ONRA, a reverse policy was initiated by the MARA in 1973-74. The result achieved was insignificant, and as such hardly affected the overall structure of the land distribution of the estates: between 1973 and 1976 the number of estates rose from 1,994 to only 2,071, hardly affecting the real structure of the sector. While awaiting a land distribution which makes economic sense, the present qualitative aspect of land structure of the "Socialist Sector" does, without doubt, represent a sub-optimal structure compared to the structure of the land operated during the colonial period. As such the quantitative and qualitative regressive reproduction of the land asset of the estates is only too obvious.

C. The farm machinery situation of the self-managed sector.

With farm machinery one is in fact looking at the main embodiment of constant capital. As the sector with the highest organic composition of capital, the evolution of the machinery pool of the SMS, perceived from the view point of both mechanisation proper and biological technology (selected seeds, use of fertilizers, etc.), bears *ceterus paribus* a sensitive relation to the performance of the sector. As a proportion of the total farm machinery, the privileged endowment of the SMS appears quite clearly.

Table III. 1. 2: Farm machinery situation in the SMS (1978).

Farm machinery	1965		1978		1984	
	Number	% of total agri. pool	Number	% of total agri. pool	Number	% of total agri. pool
1. Tractors	18,762	49%	20,178	48%	33,412	54%
2. Harvester-threshers	2,418	46%	2,225	56%	33,412	54%
3. Husbandry Implements (ploughs, etc.)	38,733	40%	51,259	55%	4,893	86%
4. Transportation equipment (lorries and trailers)	10,512	45%	9,587	36%	46,914	79%
5. Other machinery (seed drills, fertilisers spreaders..)	28,346	61%	18,131	79%	30,522	97%

Source: Annuaire Statistique de l' Algérie. 1972, 1982, 1983-84. (33)

Except for the transportation equipment for which the SMS holds 36% share (i.e. the lowest share of the sector), this sector enjoys individually the highest farm machinery endowment of the whole agricultural sector. Given the lack of time series data for each

category of equipment and the importance of tractors in the actual carrying out of agricultural production in all its aspects, e.g. trailing, ploughing, fertiliser spreading, transportation, etc., the study of farm machinery of the SMS is mainly perceived through its tractor substitute. *De facto*, tractors perform also most of the actual required traction (between 1967-1976, animal traction in the SMS dropped from 17,000 horses and mules to 6,687). The sheer size of the SMS also means that the tractorisation aspect of farm mechanisation has also become a structural feature of the machinery endowment of the sector. The significance of tractors in the overall production process depends in the last analysis on how efficiently they are used. As such the essential characteristics of the stock of tractors, which bear a strong relationship to farming efficiency, are their age, the extent of their replacement, their rate of breakdown, their number, and their mode of use (the poor qualification and training of tractor drivers and the use of tractors as a means of personal transport outside agricultural purposes - a practice not uncommon in the Algerian context - bear a strong relationship on the extent of wear and tear of the equipment). From 1967 to 1977 the number of tractors in use in the SMS hardly underwent any change.

Table III. 1. 3: Trend in the pool of tractors: 1967-1977 (U = 1, 000 units).

<i>(wheels)</i>	1967	1970	1971	1972	1973	1974	1975	1976	1977
Tractor wheel	11	13	12	12	13	13.5	13.4	13	13
Caterpillar tractor	6	5	4.8	4.8	5.4	5.4	5.7	5.5	5.6
Total	17	18	17	17	19	19	19.2	18.4	18.6
Index	100	105	99	100	110	110	111	107	108

Source: S. Bedrani. L'agriculture Algérienne depuis 1966. OPU. Algiers 1981. P. 46.

According to a survey carried out in 1972, 24% of tractor *(wheels)* were over 10 years old (or about 2, 972), 37% of tractor wheels were over 6 years old (or about 4, 458) and the proportion of tractor crawlers with an age of over 10 years was 36%. If an 8-10 year period corresponds to an average life span of a tractor (34), this means that in 1972 between roughly 5,000 and 6,000 tractors needed replacement. The actual acquisition of tractors (both categories) were 7,400 for the period 1970-73 (i.e.

1,850 on a yearly average), and 5,330 for the period 1974-77 (i.e. 1,342 on a yearly average). On the basis of the replacement figure of 1972 (between 5,000 and 6,000), and in order to maintain a constant tractor pool (case of a simple reproduction), the SMS only acquired about 1,850 units during the same year or the equivalent of 31% to 37% of its needs. The overall pool in 1973 being 18,924 and that of 1972 17,251, meant that older and inefficient tractors have been kept in use. Thus, as far as the 1972 replacement requirement alone goes, and if one takes into account the number of new tractors acquired on average by the SMS since 1972, the needs of 1972 were not to be met until around 1974-75 (35). By itself this situation creates a cumulative deficit as the required replacement of each single year has to be replaced at a much latter stage. This situation produces therefore a tractor pool which tends to grow older and older: between 1973 and 1976 the proportion of tractors over 6 years old increased for tractor wheels from 41% to 57% , and for tractor crawlers from 48% to 51%. As pool grows older the rate of breakdown tends also to increase (36).

Table III. 1. 4: Proportion of out of order tractors (%.)

Type of tractors	1972	1973	1974	1975	1976	1977
Tractor wheel	14%	16%	17%	16%	17%	18%
Tractor crawler	22%	20%	19%	18%	19%	20%
TOTAL	17%	17%	19%	18%	19%	20%

Source: Ibid.

Thus, if at an overall level the SMS enjoys a better farm machinery than most other sectors, the state of its tractor pool, on grounds of its size and replacement requirement, does not suggest, given the adoption of the prevalent technological mode of production, that the organisation of the agricultural process of production is being conducted with the highest efficiency (by extrapolation one assumes that, the state of other farm machinery being not radically different from that of tractors themselves, the SMS machinery pool on the whole is neither sufficient nor in a good technological state). But unlike the state of its farm machinery pool, the situation regarding fertilisers is different.

D. The fertiliser situation of the self-managed sector.

In the intermediate consumption of estates, fertilizers represent an important component. Over the years the increase in fertilizer consumption has been substantial.

Table III. 1. 5: Consumption of fertilisers by the SMS: 1966-77 (U= million of fertilising units).

Type of fertilisers	1966	1970	1973	1977
N	12.3	23.8	70.9	50.7
P	22	30	77.5	85
K	17.7	13.4	37	30.4
Index (1966= 100)	100	129	356	319
F.U/ha of cultivated land *	48	50	133	144

Source: Ibid. p. 37. * (excluding fallow land).

Between 1966 and 1972 the increment in consumption per ha of cultivated land (excluding fallow land), ha been multiplied by well over 3. This important increase reflected the outcome of a deliberate policy of intensification for which the increase in industrial inputs consumed by agriculture was seen as the direct pre-condition for any growth of agricultural production. From the point of view of results however, the impact of fertilisers on the production of cereals (outside permanent crops, cereal farming constitutes over 2/3 of total crops), remained unnoticed.

Table III. 1. 6: Cereal yields (U= Q/ ha).

Year	1963	1964	1965	1967	1970	1971	1972	1974	1977	1980
Cereals	9.7	6.7	7.3	3.7	7.5	8.5	10.8	7.5	5.4	9.3

Source: M. Raffinot and P. Jacquemot, op. cit, p. 386 (for the period 1963-67). Annuaire Statistique de l'Algerie. (for the period 1969-80).

Except for the year 1972, the yield achieved in 1963 remained the highest for about the two decades. If the causes of low performances were to be associated with fertilizer consumption *per se*, then what is at issue is the indiscriminate use of fertilisers. In other words, what one perceives through the example of the policy of intensification, is the kind of perception pertaining to the causes of agricultural crisis. The emphasis on an over-consumption of industrial inputs *de facto* ignores the social roots (as embodied in the dominant relation of production) behind the problem of a stagnant agricultural production (see below). The absence of responsiveness between fertilisers

consumption and yield increases, clearly shows the limits associated with the linear vision proper to a purely technical determination of agricultural stagnation. The mode of consumption of fertilisers and modern inputs in general, is therefore inseparable from the social conditions under which the process of production is itself organised. The administrative conception of fertilizer consumption was in essence bureaucratic. "Until 1971-72, the norms of utilisation imposed by MARA were uniform for the whole territory and as such they did not take into account differences between soils as to their deficiency in nutritive elements. After 1972 the norms only took into account differences in rainfall" (37). Among the other factors which lessen the efficiency of fertiliser use one notes: The insufficient preparation of soils prior to the application of fertilisers, a bad spreading of fertilisers (in 1978 for instance there were only 4,140 fertiliser spreaders for the whole SMS or the equivalent of 1 spreader for 500 ha); delays (as a result of a bad programming of fertiliser distribution, fertilisers hardly got to the estates in due time); shortfalls in fertiliser availability, etc.

In summary, and in so far as the technical determination of agricultural production was concerned, a constant contradiction between the management of the different inputs, has characterised such a management. Tractors did not follow the minimum requirement of their simple reproduction and fertilisers were not used in accordance with a certain sequence involving a preparation of soils, an optimum combination between the elements N, P and K in accordance with the variability of soils, an availability of fertilisers at the right time, rainfall conditions, etc. Like the objective elements of production, the treatment of the subjective conditions of production contributed for their part in creating inefficiency in the mode of management of state farms.

E. The management of the labour force of the self-managed sector.

a. Overall trend.

The evolution of the labour force employed in the SMS underwent considerable changes over the past two decades. Between 1964 and 1981 it dropped by 16% with around 38,500 workers leaving the sector.

Table III. 1. 7: Evolution of the labour force of the SMS (U = 1,000).

Category of worker	1965	1967	1970	1974	1977	1981
Permanent workers	134	114	173	113	100	108
Seasonal workers	100	119	102	120	99	87
Index (1966=100)	100	107	118	100	85	83

Source: S. Bedrani. Ibid. p. 58 (period 1964-70) and Annuaire Statistique de l' Algérie. Ibid. p. 162. (period 1972-81).

Except for the period 1967-70, the proportion between permanent and seasonal workers has not changed much over the years. In overall terms, these two categories of workers worked the following number of days.

Table III. 1. 8: Number of days worked (U= million days).

	1967	1970	1974	1977	1980	1981
Number of days worked	62.6	63.2	58.7	53.6	52.6	51.6
Index (1967/68=100)	100	101	94	85.5	84	82

Source: Ibid.

The evolution of the number of days followed the evolution of the labour force itself. Between 1967 and 1981 the drop in the number of days worked amounted to 17.5%. On average an appraisal of the amount of labour provided per worker/year can be illustrated by the following table.

Table III. 1. 9: Average number of days worked.

	1967	1969	1973	1976	1978	1979	1980
Number of days/worker/year	248	229	251	268	261	265	263
Index (1967/68=100)	100	92	101	108	105	107	106

Source: Ibid.

It appears therefore that the number of average days/worker/year has tended to increase from 1969-70 to 1977-78 and even if it dropped in 1978-81, it remained well above the level of 1966-79 and 1980-81(see Appendix III Figure 2).

In itself such a ratio does not however mean much. Indeed it may well be that the total

worked/worker/year) is performed by workers who for instance have worked 100, 200 or even 300 days during this year. The amount of labour provided during one particular period depends more on the number of days worked than on the number of workers. In other words, the level of employment in agriculture cannot be equated with the number of workers (the amount of labour depends as well on the amount of work performed by each category of worker: permanent and seasonal). To assess the significance of such a ratio, it is essential that the determination of the labour force be attempted in the first place. Indeed if one defines the full employment of the agricultural labour force on the basis of the use of a worker for a period of let us say 250 days' work per year, an assumption not unrealistic in the case of Algeria (see on this point A. Tiano, "Le Maghreb entre les mythes"), one can ask, on the basis of the number of worked days: What was the level of employment and to what extent there was a deficit or an excess of workers.

Table III. 1. 10: Determination of the theoretical level of employment: case of 250 days/year (U = 1,000 workers). (38).

	1967	1969	1973	1976	1978	1979	1980
Level of employment	250	253	235	214	209	210	206
Number of workers - level of employment.	+1.6	+22.9	-0.6	-14.4	-8.9	-12.5	-10.7

Source: Our own based on relevant figures already quoted.

This calculation shows that a drop in the number of workers employed in the SMS over the years has been associated (since 1973) with the diminution of real employment. From 1967 to 1972 however overemployment seems to have been characteristic of the sector. The overall movement of this labour force, and its structure, were subject to various determinants generated by conditions prevailing within the SMS as well as outside the sector.

b. Determinants of the labour situation in the self-managed sector.

Until the early 1970s the number of workers increased at a steady pace. The emergence of the experience of "self-management" was accompanied by an ideology which was openly in favour of workers. The political and social circumstances at that time, which

still reflected the relative power enjoyed by peasants and workers, played therefore a certain role in the upward trend of the labour force. Moreover, at that time -1960 - agriculture was still the most important economic activity (21% of GDP was secured by agriculture, against only 7% in 1979) and the main job provider (39). But if the first half of the decade following the independence of Algeria was dominated by the theme of self-management and the consolidation of the economic basis of the state which accompanied it, by the mid 1970s the change in the political power reversed the economic priorities just as an ambitious industrialisation project was embarked upon. In many ways the logic of capital accumulation was at the root of the compression that the SMS wage fund underwent since 1969, and with it, the level of the work force itself. The compression of the wage fund of the SMS was seen as an effective way to reducing costs, and therefore food prices. Wages were thus narrowly seen as mere costs. At that date, i.e. 1969, the industrial option of the state became obvious and therefore its realisation was embodied with a force of compulsion. Indeed the logic of this compression which accompanied the promotion of cheap food policy, was essentially dictated by the necessity of raising the maximum agricultural surplus possible in order to minimise the level of food imports. The evolution of the manpower cost illustrates this situation.

Table III. 1. 11: Evolution of the cost of manpower: 1963-71. (U= AD million).

	1964	1965	1968	1969	1970	1971	1972
Manpower cost.	408	578	659	730	617	601	444
Index 1968= 100).	62	88	100	111	93	91	67

Source: Duprat, Gérard. Op. Cit. for the period 1963-68; S. Bedrani. Op. Cit. p. 132 for the period 1968-1971 and Benhouria, Tahar. op., cit., p. 48 for the year 1971-72.

The evolution of the manpower cost went through two stages: it increased until 1969-70 and has considerably dropped since. In 1971-72 the level of the wage fund can be considered to be well below that of 1966-64 (40). Except for a minor increase (6.7%) in 1962-63, the wage rate of the agricultural sector was not altered until 1972 (41).

Table III. 1. 12: Trend in the agricultural wage rate (U = AD/8 hours work.)

	1961	1963	1964	1971	1972	1974	1975
Wage rate*	7.06	7.54	7.54	7.54	9.8	12.25	15.3
Index (1963=100)	94	100	100	100	130	162	203

Source: S. Bedrani. Op. Cit. p. 131. (*Such wage rates are gross nominal current rates).

In relative terms (wages to total costs), and at current prices, the reduction through compression went from 54% between 1963-64 to 42% between 1971-72 .

Table III. 1. 13: Labour cost in total cost (%).

Year	1963	1964	1966	1967	1969	1970	1971
% in total cost	54%	57%	56.9%	56%	52%	45%	42%

Source: Duprat, Gérard and S. Bedrani . Op. Cit.

The low remuneration of the agricultural labour force (a corollary of the overall state policy of agricultural surplus extraction), and the overall conditions which prevailed within and without the SMS, explains to a large extent the development of the adverse conditions affecting the reproduction of this agrarian labour force, particularly from the very point of its skill and its age distribution. Mitidja, which most typifies the experience of self-management experience, and the nature of the problems it encounters, illustrates this situation. From 1968-69 onwards, the number of permanent workers leaving the estates increased, partially because of the bad conditions prevailing in the sector (particularly the level of wages), and also because of better job opportunities generated by the industrial projects. The main characteristics of this labour force leaving the agricultural activity were: Its size, its age and its skill. From 1969 to 1970 the number of leavers from 40 estates (42) in Mitidja represented between 15% to 13% (43) of the total work force. According to the survey conducted by G. Muttin, the number of leavers appeared however to be much higher during the same period. The percentage of leavers varied from 30%, 44% and 22% of the total workforce under investigation (44). The number of leavers was higher in industrial areas. For all the Mitidja the age structure of leavers was as

follows.

Table III. 1. 14 : Age structure of Mitidja workers.

Age group	Age structure of permanent workers	Age structure of leavers according to M ARA survey	C.N.R.E.R.S.R survey
15-20	1%	1.100%	2%
20-25	10%	20.52%]	80%
25-30	14%	21.70%]	
30-35	12%	15.56%]	
35-40	13%	10.92%]	
40-45	9%	6.95%]	15%
45-50	9%	5.40%]	
50-55	8%	2.98%]	
55-60	9%	1.98%]	
60 and over	15%	12.89%]	3%
Total	100	100	100

Source: G. Muttin. Ibid. p. 363.

The age group 20-30 (or about 25% of the total workforce), represented over 42% of leavers. The age group 20-40 (or about 50% of the total workforce), represented between 70 and 80% of leavers. The age group 40 and over (50% of the total workforce) represented 30% of leavers, of which a high proportion of workers were over 60. The importance of the second age group, i.e. (20-40), in the age structure of the permanent work-force, coupled with a reduction over the years of the total number of agricultural workers, is such that the agricultural labour force of the estates is getting older with the likelihood of its growing less and less efficient. The last (and not the least) characteristic of leavers was their qualification. The category of leavers was the most qualified (45): "Those who leave are not only the youngest but the most qualified as well. Only the non-qualified and the old stay" (46). In turn the prevalent policy of training is not specifically geared to raising the skill profile of the immediate producers. Training has been mainly catering for the needs of agricultural engineers and technicians (who tend to remain more at offices than work at grass roots level), rather than for direct producers (47) who are facing a more and more complex technical organisation of production as a result of the introduction by the MARA, of new crops and sophisticated farm machinery. Like the objective conditions of reproduction, the conditions of reproduction of the agricultural labour force have been steadily

deteriorating. As a result of the requirement of the pursuit of the cheap food policy necessitated by the overall conditions of capital accumulation, the overall characteristics of the agricultural labour force such as its comparatively low price of remuneration, its quantitative compression, its tendency towards aging, etc., were accompanied by other adverse terms of trends occurring in the sector.

F. The performance of the estates: some indicators.

From 1964-65 onwards, proceeds or the monetary valorisation of the physical production of the estates, had been declining at a steady rate with the result that the proceeds in 1963-64 were in fact much higher than in 1970-71. The inflated level of proceeds since 1974 only reflects the impact of the upward revision of most agricultural prices, a revision which as will be seen in the conclusive part of this chapter, was more than compensated for by the increase in the level of overall costs.

Table III. 1. 15: Evolution of the value of some agricultural output of the estates (U=AD million at current prices).

	1964	1965	1968	1969	1970	1971	1974	1976	1978	1979	1980
Total proceeds	974	1, 128	978	936	858	909	995	1,894	2,562	2,688	3,639
Index (1968=100)	99.5	115	100	96	88	93	102	193	262	274	372

Source: Duprat, Gérard. p. 478, S. Bedrani. Op. Cit. p. 174 for the period 1974-1976 and S. Bedrani. Vers un renouveau de l'agriculture Algérienne? Monde En Développement. N° 36 1981. p. 40.

For the entire period, but with the exception of 1976, the estates were thus financially managed with a deficit. The drop in proceeds (without taking into account the effect of inflation), was also accompanied by the freezing of producer prices for over a decade (48).

Table III. 1. 16: Production prices index (1965=100).

Product	1963	1967	1968	1969	1971	1972	1974	1975	1976
Soft wheat	100	100	100	108	108	108	118	144	192
Hard wheat	100	100	100	106	106	106	108	128	172
Barley	100	100	NA	105	100	105	105	135	165
Chick peas	NA	NA	NA	NA	100	100	111	111	247
Broad beans	NA	NA	NA	NA	109	109	73	73	273
Lentils	NA	100	92	92	92	92	102	102	255
Espereto grass	NA	100	100	100	156	156	156	156	156
Wine	NA	NA	100	127	127	127	139	139	NA
Sugar beet	NA	100	100	100	100	100	101	NA	NA
Table olives	NA	NA	NA	NA	100	100	101	NA	NA
Oil	NA	NA	NA	NA	100	NA	NA	172	172

Source: S. Bedrani quoted by Benhouria, Tahar. Ibid. p. 118.

In terms of the physical performance proper, the overall situation of the structure of agricultural production displayed an overall downfall trend.

Table III. 1. 17: Evolution of the main products of the SMS:1965/74 (1965=100).

	1965	1967	1969	1971	1973	1974
Cereals	100	108	109	113	92	104
Pulses	100	105	136	76	86	92
Vine	100	42	58	61	40	44
Citrus fruits	100	84	79	87	87	93
market-garden products	100	77	86	74	71	51

Source: Benhouria, Tahar. Ibid. p. 97 (period 1965-74) and Annuaire Statistique de l'Algérie 1982 and 1983-1984.

With the marginal exception of cereals, the production index for the main agricultural products displayed a non-stop downward trend for two consecutive decades. In relative terms, i.e. in relation to the overall agricultural sector, the level of performance of the SME as measured on the basis of 6 major crops (cereals, pulses, vegetables, industrial crops, citrus fruits and vine growing), displayed the following characteristics.

Table III. 1. 18: Production performance weight of the SMS.

Crops	% of total agricultural production in 1969-70	% of total agricultural production in 1979-80
Cereals	28%	34%
Pulses	57%	39%
Vegetables	46%	33%
Industrial crops	65%	65%
Citrus fruits	89%	86%
Vine- growing	87%	91%

Source: Annuaire Statistique de l'Algérie. 1981.

With the exception of cereals, the weight of the SMS contribution in agricultural production did not display any upward trend. As a matter of fact its percentage weight in total agricultural production steadily decreased. The case of wine growing is not significant in itself. As the main producer, the increased weight of the SMS share in total production implies rather that the degree to which that crop was being abandoned, was much greater among private producers than in state agriculture. In terms of yields, the overall position of the SMS shows a steady downward trend.

Table III. 1. 19: Yields of the major crops of the SMS: 1970/1984 (U= quintal/ha and hectolitres/ha).

Crops	Yields			Rate of Increase	
	1970	1980	1984	between 1970 -1980	between 1980 -1984
Cereals	7.5	9	7	+24%	-15%
Pulses	4	3	2	-25%	-33%
market-garden prod.	72	62	67.4	-14%	+9%
Industrial crops	48	55	49	+14.5%	-11%
Citrus fruits	113	101	63	-11%	-37%
Vine (U= hectolitres)	30	18.4	10	-39%	-45%

Source: Annuaire Statistique de l'Algérie 1981, 1982 and 1983-84.

If one excludes cereals and industrial crops between 1980 and 1984, the drop in yields is both general and considerable for the entire period 1970-1980. In their own terms, such results express the direct dimension of the crisis of the Algerian agriculture at large and of the SMS in particular. For most products there has been a regression or at best a stagnation.

If one looks at other conditions of production within the SMS, one cannot avoid noticing other signs of regression. 250,000 ha, of which 10,000 were irrigated, have been lost

to industry; 84% of the area needed to be replanted in order to maintain a simple reproduction of orchard, has not been achieved; and 92% of citrus fruits land have not been replaced (replacement only concerned 2,000 out of 12,000 ha), etc. In value terms, the study of the regressive condition of reproduction, has been conducted by J.C. Karsenty (49). The methodology of his piece of research is based on a comparison between the planned investment necessary to keep the level of fixed factors of production constant, and the realised investment, for a period of 12 years (1962-1974). The determination of the value of the selected four main fixed factors of production was based on a minimum cost evaluation (the cost of reference was that of the year 1969). The details of the structure of investments appeared as follows:

Table III.1.20: Evaluation of the renewal of certain fixed factors of production during 1967/74 (U=AD 1,000).

	Level of resources compatible with simple reproduction	Planned Investment	Realised Investment	% of realised investment
Equipment	1,254,000	1,404,500	640,951	51 %
Plantation	979,000	537,393	155,478	16 %
Livestock	200,000	211,200	86,861	43 %
Irrigation	20,000	259,064	136,804	62 %
TOTAL	2, 653,000	2,412,160	1,020,094	38 %

Source: Ibid. pp. 130-131.

Had planned investment been realised, all fixed factors of production would have been reproduced to their original value. From the above table, it clearly appears that, in terms of realised investment, the replacement of all fixed factors of production has not been met up to 62% of their value. The rate of realisation of individual planned investments stretched from 16% to 62%). In terms of the above degree of replacement of their fixed factors of production, the estates materially find themselves in the impossible situation of meeting the requirement of an expanding agricultural production and an increasing labour productivity. From the viewpoint of their reproduction "the regression of fixed factors has probably influenced in a considerable manner the stagnation of all the productions of the SMS during this period" (50).

From all aspects of production organisation and its conditions, the estates displayed all the characteristics of a sector in crisis with declining production, employment, manpower skill, yields, proceeds, etc. From the viewpoint of the mode of management of the estates, one can conclude that in effect, the bureaucratic administrative form under which the state operated the extraction of the agricultural surplus originating from the estates, ultimately altered the very conditions of formation of the agricultural produce itself, resulting in the overall declining performance of the sector.

CONCLUSION

The experience of self-management or more precisely the state management of the ex-colonial sector has resulted in an inability to translate the potential of the sector into increased production and increased labour productivity. The centrally administered bureaucratic running of the estate has particularly meant that at no point were the workers part of any significant decision making process concerning the farming methods, the norms of production, the marketing conditions, the organisation of the technical process of production, etc. As such the control and incorporation of the producers, rather than their association and involvement in the conditions of production, have been the constant line of policy pursued by the state and its representatives. The state control of all conditions of production and reproduction of the estates bears in that respect a direct relation in determining the level of performance of the whole sector. Viewed from the financial side, the overall gross financial results of state agriculture displayed a permanent state of deficit.

Table III.1.21: Financial results of the state sector (U= AD million)

	1975/76	1976/1977	1977/78	1978/79	1979/1980
Total costs (1)	2,101	2,214	3,115	4,069	4,670
Proceeds (2)	2,263	1,825	2,562	2,688	3,639
Result (2) - (1)	+162	-389	-553	-1,381	-1,031
Ratio of (2) to (1)	107.7	82.4	82.2	66.1	77.9

Source: S. Bedrani *Vers un renouveau de l'agriculture Algérienne*. Op. Cit. p. 41.

As pointed out by G. Muttin, if a responsibility is to be advocated on the basis of such results, it is certainly not that of workers, for to do so would make the workers "support the consequences of decisions which were imposed on them" (51). Beyond the identification of those social forces which control the conditions of production and reproduction, what is at issue however is the nature of agricultural development which is being pursued. From the viewpoint of the peasantry, the continued co-existence of the state management of the ex-colonial farms and the exploitation of the ideology of self-management, only managed to precipitate their further economic and social

marginalisation. Beyond the industrial mode of accumulation proper, the development of their proletarianisation and pauperisation was achieved through the *de facto* preservation of capitalist relations in the running of the ex-colonial farms combined with their consolidation on the basis of the justification of the "failure" of self-management. While the development of capitalist relations was pursued under the banner of "self-management" and "socialist agriculture", the preservation of agrarian structures conforming in essence to a Junker capitalist development (i.e. based on large capitalist estates), was however pursued without Junkers as such. The substitution of the neo-colonial state for the colonial state, was not however accompanied by the substitution of colonial landlords by a domestic land élite. The political substitution was not accompanied by the economic restitution of the estates in favour of a domestic land élite as such. The absence of the latter (the development of colonial agrarian capitalism which was pursued for the essentially exclusive interests of French landlords did not objectively allow for the emergence of a powerful enough class of indigenous landowners) has directly contributed to preventing the emergence of a proper Junker development of Algeria's post-independent agriculture.

On the other hand the "freezing" of capitalist relations of productions on the ex-colonial sector which accompanied the consolidation of the state managed agricultural sector, did not however offer the alternative of a capitalist development of agriculture based on a farmer road as such. The preservation of the overall features of colonial agriculture eliminated all immediate peasant claims on a land whose very genesis resulted from the long process of land confiscation and peasant pauperisation and proletarianisation. As the unquestionable direct depository of colonial landowners, the post-colonial state operated therefore with the same independence *vis-à-vis* both the domestic landowners and the peasantry in general. This class continuity between two apparently distinct historical periods is evidently the outcome of the colonial history which produced both a relatively powerless land élite on the one hand and, on the other, a mass of pauperised and proletarianised peasants unable to fulfill the ultimate aim for which they waged the bloodiest war of their history, i.e. accession to land. In short the

capitalist character of the colonial estates was taken over by a class (or class in being), with capitalist aims, but devoid of any form of capitalist apprenticeship. The status of the post-independence ruling class was essentially in that respect of a petty bourgeois nature. While excluding itself from an outright Prussian mode of development of agriculture, or a farmer road of development (the class nature of the petty bourgeois post-colonial state, by preserving the same colonial land structure and land ownership, simply perpetuated the divorce of the land from the pauperised and proletarianised peasants), the development of state-managed agriculture resulted in the preservation of the same antagonistic contradiction which characterised its early formation, i.e. since its colonial history: the preservation of the ex-colonial agricultural sector and the reproduction of the economic mechanisms generating the pauperisation and proletarianisation of the Algerian peasantry. Such a preservation was however maintained only on the basis of a compromise. The rejection of the farmer road found its own justification in the exploitation of the ideology of self-management while the justification of the state/Junker mode of management of the ex-colonial estates found its justification in the confiscation of land from its colonial landlords but without its distribution to domestic landowners.

While the persistence of a stagnant agriculture increasingly raised the question of the status of the estates and their mode of management, the crisis of the peasantry in turn was not in any way perceived in connection with the historical development of what has now become a state agriculture. The "SMS" subtracted itself from any form of land transformations. As in the past, it was the "traditional" agricultural sector which provided the substance for such transformations. In view of the on-going food crisis, the diffusion and extension of capitalist relations, through the initiation of land reform, and the corollary elimination of all pre-capitalist forms of land use in order to develop the productive forces, was ultimately seen as the main objective. In the following two chapters our aim is to emphasize the contradictions of such a programme but also highlight its main limitation: the pursuit of the objective of food production increase is totally divorced from the fate of the peasantry.

NOTES

1-Abdi, N. *Revue Du Tiers Monde*, XVII, N° 67, Juillet-Septembre 1976, p. 667.

2-See in particular Lenin, V. "Le développement du capitalisme en Russie". Œuvres Complètes. Tome 3. Editions Sociales and Editions du Progres Moscou. 1977.

Lenin, V. Programmes Agraire de la Social-Démocratie dans la 1ère Révolution Russe de 1905-1907. Tome 13. Edition Sociales and Editions du progres.

A good account of the theoretical significance and interpretation of the "Prussian road" of development of agriculture is given by Wilson, Antony. The 'Prussian Road' of Agrarian Development: A Reconsideration. Economy and Society. Volume 11 Number 4 November 1982.

3-N. Abdi. Op. Cit. p. 668.

4-Y. Guillermou. Revue due Tiers Monde. Volume XVIII, N° 71, July-September, 1977. p. 608.

5- Abdi, N. Ibid. p. 672.

6-I. Clegg. Workers' Self-Management in Algeria. Allen Lane The Penguin Press. 1971. p. 40.

7-Ibid. p. 39.

8-G. Duprat. Révolution et autogestion rural en Algérie. Editions Armand Collin. 1973. p. 57.

9-T. Benhouria. L'économie de l'Algérie. F. Maspero 1980, p. 33 put forward the 800, 000 ha figure, while the then Ministry of Agriculture, Mr Mahsas. l'autogestion en Algérie. Edition Anthropos. 1975, p. 40, speaks of 1,000,000 ha. These inadequacies are in fact quite common in the Algerian data gathering bodies.

10- For a detailed assessment of such Decrees and that of their thorough significance see in particular I. Clegg detailed analysis Op. Cit. in particular *Chapter 4: The Décrets de Mars*. pp. 57-74.

11- CAPERs were created in 1955 and were part of a colonial land reform scheme to distribute 250, 000 ha to 150, 000 peasants (these figures are those of Benhouria, Tahar. Op. Cit. footnote N° 3, p. 35). CAPERs programme was also part of a political

programme. It was thought that the distribution of land to the peasants would lessen the popular support to ALN and defeat the process of war and struggle for independence.

12- No data is available to measure the extent of the land nationalised.

13- Is considered permanent, any worker who performed a continuous 6 months work (1963 legislation) in any SM farm or a minimum of 200 days work per year (1969 text).

14-Only in farms with a minimum work-force of 50 workers.

15- The communal council for the animation of self-management is an outside body to the state which does not exist very often or if it exists it scarcely functions. Its members are the president of managing committees of the commune, a party representative, a trade union representative (U.G.T.A), an army representative and the administrative authorities of the commune.

16- According to A. Tiano. Le maghreb entre les mythes. PUF 1967, the managing committee is not democratically elected or re-elected in 50 to 85% of cases.

17- Mahsas, M. Ibid. p. 132.

18- G. Lazarev. Autogestion agricole en Algérie quoted by M.Raffinot, and P.Jacquemot. Le capitalism d' état Algérien. F. Maspero. 1977. p. 279.

19- CCRA (Centre Cooperatife de la Réforme Agraire: co-operative centre for agrarian reform) was in fact the name given to SAP (the provident agricultural society). The difference between CCRA and S.A.P is only a difference of wording used to hide the ideological colonial connotation attached to S.A.P. S.A.P was a colonial agency in charge of a multivalent mission centered on the backing up of the traditional sector on 5 fronts: cereals section, machinery section, supply section, advisory section and credit section. CCRA represents therefore the credit section of the SAP. To give the credit distribution to such an institution which during colonial times was unable to cope with the sole needs of the traditional sector was seen by many as symptomatic of the inadequacy of an agricultural credit policy which catered for the broader and more complex financial needs of the ex-colonial sector. Furthermore the decision to withdraw the credit structure to the private sector carried little concern *vis-à-vis* the consequences it may have on the performance of this sector.

20-A. Mahsas. Op. Cit. p. 175.

21-CUMA (Co-operative d'Utilisation du Matériel Agricole: co-operatives for the use of farm machinery), created before the independence of Algeria, was catering for the needs of the colonial sector.

22-M. Raffinot and P. Jacquemot . Ibid. p. 305.

23-CACAM was the colonial credit agency which was catering for the financial needs of the colonial agricultural sector.

24- G. Muttin. La Mitidja: decolonisation et espace géographique. O.P.U Alger. 1977. p. 374.

25-Duprat, Gérard. Op. Cit. p. 166.

26-In many cases water for irrigation purposes was diverted for the needs of industry.

27-G. Muttin . Ibid. p. 186 who adds: "Every thing went as if colonisation had to throw a chaste veil on its land transaction".

28-G. Muttin, who conducted a study on land distribution of the SMS in the Mitidja, plain brilliantly synthesized the characteristics of the farm land typology of the estates.

29- Official statistics still integrate the CAAMs and their activities within the SMS. There is therefore no separate statistical treatment of the C.A.C.A.Ms and the rest of the SMS. In the official jargon the CAAMS and the SMS are called the "Socialist Sector".

30- During the long 7 years of war it waged against France, and which cost Algeria 1.5 million persons, the National Liberation Army drew the majority of its fighters from the peasantry. The non-rural war veterans and the most politically powerful, benefited for their part from loans exceeding the AD 1 million. One also ought to point out that the actual distribution of the CAAMs benefited mainly war veterans issued from the middle peasantry.

31- Though the CAAMs benefited from better conditions during their formation (the formation of the CAAMs was realised with a relative freedom concerning the choice of land, its lay out and the crop it supported), their land characteristics still however convey the same limiting factors than that of the SMS: scattered plots, intermingling

with private land, bad regrouping, large size of the exploitation, etc.

32-G. Muttin. Op. Cit. p. 187.

33-Data pertaining to the post-1978 period do not refer exclusively to the SMS alone but to the "socialist sector", i.e. the sector including the SMS, the sector derived from land reform as well as the machinery pool of CAPCS (which incidentally does not cater exclusively for the state dominated agricultural sector). In what follows, and as a result of such a constraint, our analysis will be mainly centered on the year 1978, the reference to the year 1984 cannot be taken at its face value since by definition the private sector also has access to the use of farm machinery through the procedure of renting.

34- Which in the case of Algeria, and for reasons mentioned earlier, is a rather optimistic assumption.

35- Replacement needs: 5,000 to 6,000. The number of new tractors acquired was: 1972: 1850, 1973: 1850, 1974: 1342, 1975: 1342 or a cumulative total of 6,384.

36- The problem of spare parts coupled with the inefficiency of the repair boards ONAMA tend to increase the period of immobilisation of equipment in general. It is a common practice for the estates to wait several months and sometimes well over a year to get either the desired equipment and/or the repair done.

37- S. Bedrani. Op. Cit. p. 37.

38- This calculation only serves the methodological point that what matters more is not the actual level of workers but rather a level of employment in accordance with the full employment of workers.

39- See Appendix III.1.

30- With a rate of inflation of the order of 15%, the level of the wage fund in real terms would have been AD 377 million.

41-For sake of comparison, in the non-agricultural sector the minimum wage rate was:

9.660 (1961): positive difference= AD 2.6 (+36.8%)

9.960 (1963): positive difference= AD 2.42 (+32.09%).

10.88 (1971): positive difference= AD 3.34 (+44.29%).

13.84 (1972): positive difference= AD 4.04 (+41022%).

16.64 (1974): positive difference= AD 4.39 (+35.83%).

19.20 (1975): positive difference= AD 3.9 (+25.49%).

One also ought to point out that the experience shows that the agricultural minimum wage rate tends in fact to be institutionalised as the real maximum rate.

42- Findings reported by G. Muttin. Op. Cit. p. 362.

43- Respectively MARA estimates, and C.N.R.E.S.R estimate (Centre National de Recherche en Economie Rurale et Sociologie Rurale: national centre research in rural economy and sociology).

44-Respectively for the 3 estates of l' ARBA, the 7 estates in the Wilaya of ROUIBA, and the estate of HADJOUT.

45- In her study of self-management in Mitidja, C. Chaulet gives the following proportions of the degree of illiteracy of the workers of the estates: 6% of workers read and write French, 9% of workers read and write Arabic, 85% of workers are illetrate.

46- G. Muttin . Ibid. pp 364-365.

47- In themselves such factors cannot achieve much if on the other hand the agricultural work is de fact devalorised by society (in a society where non-agricultural and particularly non manual activities provide better, higher and easier gains (and social status), as is the case in Algeria, the incentive to engage in agricultural activities vanishes and leads to urban migration where at least, for the same skill, the income gained is much higher (not ton speak of the access to social services) and within the agricultural activity itself (the producers are not encouraged produce more and work harder as the incentive to work, in the first place, seems to have deserted the Algerian countryside altogether). At the level of skilled labour the same phenomenon is observed. In 1969 "among 200 engineers 400 Algerian technicians none of the former and only a dozen of the latter actually worked at field level". S. Bedrani. L'agriculture Algérienne depuis 1966. OPU. Algiers 1981, p. 64.

48-For the sake of comparison, the inputs prices evolution for the following main items increased as follows:

-Tractors wheels 100-180 (1969/73)

-Harvester threshers 100-135 (1969/73)

-Seed-drill 100-250 (1969/73)

-Lorry (12 tons) 100-200 (1973/77)

-Lorry (3 and 4 tons) 100-200 (1972/77)

-Potatoes (seeds/ quintal) 100-193 (1973/77)

-Pesticides 100-114 (1973/77)

49- J.C. Karsenty. Les investissements dans l'agriculture Algérienne. Problèmes agraires au Maghreb . Edition Centre National de Recherche Scientifique, 1977.

50 - Ibid. p. 132.

51-G. Muttin. Ibid., p. 409.

CHAPTER II

THE PRIVATE AGRICULTURAL SECTOR.

Introduction.

The performance of the private agricultural sector (PAS) cannot be conceived *à priori* without an assessment of the set of factors and historical circumstances which largely determined its features. As such the characteristics of the PAS are largely the result of a deep-rooted historical process of decomposition of the natural economy under the combined effects of the conditions which surrounded the genesis of the colonial sector and the more subsequent impact of generalisation of commodity relations on peasant economy. In terms of representation, and unlike the SMS, little is however known about the private agricultural sector (PS) even if it represents the major agricultural sector in terms of land endowment (70%). The bias has its own historical roots. In colonial times, the agricultural sector was the pool from which colonists constituted their own sector. In the course of colonisation, the history of the colonial agricultural sector was considered as the dominant history, or as the forefront sector in the official history of colonisation. As such, our knowledge of the traditional agricultural sector has always been subordinated to that of the European sector. After independence, a certain form of continuity, in the imbalanced dual representation of the agricultural sector persisted. The concern of the neo-colonial State was mainly centred around the management of the ex-colonial farms alone, and this for two main reasons. On the one hand there was the unavoidable issue of an important sector without its colonial landowners (1) and on the other there was the problem of the political power of the Algerian landowners within the new ruling class. In a way, and up to the 1970s, the PAS was completely left to its own and only as a by-product of the programme of "agricultural revolution" in 1971/72 did it become a centre of interest for the new political power. The present study of the PAS centres on the analysis of its structure

prior to the introduction of the study of its transformation, i.e. the study of the programme of "agricultural revolution". The impact of the agricultural transformations on the PAS will be considered in the concluding remarks following the study of the agricultural revolution proper.

A.The land base of the private agricultural sector.

The formation of this sector is in itself interwoven with, and the by-product of colonisation. The initiation of the constitution of the colonial agricultural sector was the product of a violent dispossession of the collective domestic owners of the land: the clans, tribes and religious institutions (2). In the course of such a process, and as an organic by-product, both the geographical and economic boundaries of the indigenous sector proper were progressively shaped (3). Land appropriated by European settlers being of the best quality, the constitution of most of the land of the Algerian sector took place, because of the successive forms of displacement of the peasantry, on essentially marginal and sloping soils, as evidenced by the following table.

Table III.2. 1: Topographic distribution of the private sector.

Class area	Number of farms U=1,000	Plains %	Plain/ hills %	Hills/ mountain %	Semi mountain %	Mountain %	Undetermined %	Total %
≤ 1 ha	72	18	2	32	5	38	5	100
1 ≤ X ≤ 10 ha	369	35	10	28	9	16	2	100
1 ≤ X ≤ 50 ha	89	49	18	18	10	4	1	100
≥ 100 ha	7	44	19	20	13	2	2	100
Total	537	35	10	27	9	17	2	100

Source: Manpower Survey in the private agricultural sector quoted by S. Bedrani. Op. Cit. p. 73.

Out of the 35,000 farms, only 35% are located on soils suitable for proper cultivation, i.e. on plains, while the rest 65% are situated in places most favourable to wind and water erosion. In terms of area distribution, the 35% of farm units cover 42% of the total area of the sector. The general indicator of the topographic aspect of the private land being so, there however remains the problem of assessing its size, since an open conflict exists between the different data sources(4). Between 1950 and 1972 the

PAS has tended to display a constant reduction in its land base when no available concrete evidence supports such a movement. The issue at stake tends to suggest that the progressive reduction in the land base of the private sector only affected a specific form of property: mainly large farms. As such, the discrepancy between the actual size of the sector and what the data show lies in the attitude of big landowners in underestimating their property considering the ever permanent threat of a land reform. Though between 1962 and 1971/72 most State intervention in agriculture was mainly focused upon the management of the ex-colonial sector, the imminence of an agricultural reform had always been in the air. The transformation of the colonial sector into a "socialist agriculture", the intense radical political debate that accompanied it, was perceived as a potential threat to all landowners and particularly large ones. The 1964 nationalisations of the Algerian landowners who collaborated with the French colonial power was a concrete measure that lead landowners to fear the any time occurrence of a radical land reform. The military coup of 1965 brought to power a more open threat to the landowners as a land reform was promised for 1966, then for 1967, until eventually the actual project of "agricultural revolution" (5) was issued on November 1971. The most accurate account of the PAS was initiated by the colonial power in 1950 at a time when the threat of a land reform did not exist for domestic landlords (6).

Table III.2. 2: Structure of the PAS in 1950.

Size of farms	Number of farms (1,000)	%	Area (1,000 ha)	%
≤ 1 ha	105.9	16.8	37.0	0.5
1 ≤ X ≤ 10 ha	332.5	52.7	1,341.0	18.2
10 ≤ X ≤ 50 ha	167.1	26.5	3,185.8	43.3
50 ≤ X ≤ 100 ha	16.5	2.6	1,096.0	14.9
≥ 100 ha	8.4	1.3	1,688.0	23.0
Total	630.7	100	7,349.0	100
Northern Algeria	543.3	- -	7,131.2	- -

Source: "Tableau de l'économie Algérienne". 1960. p. 129 quoted by M. Raffinot and P. Jacquemot . Op. Cit. p. 313.

The most striking feature of the structure of the PAS is the extreme imbalance between the number of farm units and their size. The majority of farms (70%), controlled less

than 1/5 of the total area of the sector (such farms represented the 'stronghold' of most of the poor peasantry). Conversely 4% of farms controlled well over 1/3 of the sector and the middle farms (1/4 of all farms) controlled nearly 1/2 the size of the sector. The access to land was therefore very unequal and indirectly hints at an important differentiation of the peasantry.

When however the first post-independence survey was carried out in 1965 in order to assess the extent of the agricultural sector in general, and primarily that of the sector of self-management, the new data produced a somewhat different picture of the private sector.

Table III.2. 3: Structure of the PAS in 1965 .

Size of farms	Number of farms (1,000)	%	Area (1,000 ha)	%
≤ 1 ha	134.0	23.0	59.0	1.0
1 ≤ X ≤ 10 ha	288.0	49.0	1,260.0	21.6
10 ≤ X ≤ 50 ha	147.0	25.0	2,967.0	50.8
50 ≤ X ≤ 100 ha	11.8	2.0	765.5	13.1
≥ 100 ha	4.6	0.8	786.9	13.5
Total	586.8	100	5,839	100

Source: Statistiques Agricoles N° 5, Juin 1968. Ibid. p. 313.

Compared to the 1950 survey, the overall area of the sector dropped by over 1.5 million ha. This diminution coincided to a certain extent with the variation in the area pertaining to average farms, and above all large farms (50 ha and over) with the latter accounting for 82% of the overall drop. Between 1950 and 1965, it was over 20% of the total area of the private sector which disappeared from the statistics. This land shrinking process was not to stop. Amid the implementation of the programme of "agricultural revolution" a new survey of the private sector was carried out in 1973 (7). The findings of the survey were as follows.

Table III.2. 4: Structure of the PAS in 1973.

Size of farms	Number of farms (1,000)	%	Area (1,000 ha)	%
≤ 1 ha	155.9	21.9	60.6	1.1
1 ≤ X ≤ 10 ha	406.8	57.2	1,572.6	28.7
10 ≤ X ≤ 50 ha	134.5	18.9	2,565	46.9
10 ≤ X ≤ 50 ha	9.7	1.3	642.8	11.7
≥ 100 ha	3.4	0.4	622.4	11.3
Total	710.4	100	5,464	100

Source: G. Muttin. "Agriculture et dépendance alimentaire en Algérie", Machrek Maghreb N° 90, October November December 1980. p. 55.

Between 1964 and 1973, the PAS "lost" 375,303 ha, or 6.4% of the total area. Compared to the 1950 figure, the sector was reduced by 1,884,737 ha or 1/4 of its original size. In fact the extent of the "loss" was much greater if one takes into account the fact that part of land of the ex-colonial farms was acquired by Algerian landlords during the last years of colonisation, as well as in the aftermath of the political independence of Algeria. In total, an estimated 2 million ha "disappeared" from the data. Here again, the largest drop was displayed by large farms. Compared to the 1965 figure their size has nearly been halved (2,784,000 ha in 1950; 1,265,322 ha in 1973). The overall account of the variations affecting this specific category of farms, is summarised in the following table.

Table III.2. 5: Fluctuation in the area and the number of farms over 50 ha.

Class area	Reduction in the number of farm units		Reduction in the area (ha)	
	1950-1965	1965-1973	1950-1965	1965-1973
50 ≤ X ≤ 100 ha	-4,705	-2,110	-330,515	-122,761
≥ 100 h	-3,844	-1,246	-901,895	-164,407
Total	-8,549	-3,356	-1,232,410	-287,168
Grand total	-11,905		-1,519,578	

Source: Based on data already given in previous references.

As far as these holdings are concerned, the reduction in their number is not as significant as the reduction in their size. Indeed as land concentration proceeds, the number of holdings do tend to drop, but if in the same process a parallel reduction in the number of farms is taking place, such a movement contradicts all the historical

trends and movements of land concentration. This contradiction reveals however in its own way the amount of land which can be considered to be concealed by the potential victims of a programme of land distribution (8). It is also worth noticing that the drop in the area of the PAS was more important for the largest farms during the period 1950-1965. Such a characteristic may indirectly confirm, in a way, the fact that part of the land of the colonial agricultural sector which did not appear in the asset of the SMS, was in fact appropriated by private landowners and most probably by big landowners. According to this line of argument, one can see why large and average landowners had more land to hide (or fail to report) between 1950 and 1965 (1,232,410 ha), than between 1965 and 1973 (287,168 ha). At official levels, the inability of the MARA to assess the extent of the PAS, or more precisely to put forward the necessary explanation about the missing 2 million ha, remains unchallenged (9).

B. The farm structure of the PAS.

Broadly speaking the Algerian farming system in the private sector is based on three main economic units, the nature of which is broadly determined by the interaction of their size, their level of employment and their use of modern inputs. The pattern of productions is largely determined by the combination of these characteristics (10). From the typology of farm structures, three main units emerge: small, average and large farms, which when translated in social terms identify at the same time the differentiation between poor, middle and rich peasantry.

a. Subsistence and small farm units (the family sector).

This sector represents the poorest section of the PAS, and has a very fragile land base. Though representing the majority of holdings (70% in 1950), it only controlled less than 20% of all private land. In terms of the ratio of the area available to each holding, the situation of this sector worsened between 1950 and 1972: 3.14 ha in 1950, 3.11 ha in 1965, and 2.9 ha in 1972. Such figures suggest that, if one takes into account the number of persons per holding on the one hand, and the demographic rate of increase of family farmers on the other, such a sector is very limited as to the number of persons it can actually employ and support. A further characteristic of such a sector is

that it is far from being a homogeneous structure. A fringe of it, particularly holdings with less than 1 ha, is the most economically vulnerable. This fraction of the sector best epitomises what is referred to as subsistence farming. Unless these micro holdings are located on irrigated land, which then makes it possible for their owners to specialise in market-garden products, these holdings tend to cater for the exclusive food needs of their family members (it is on such holdings that simple commodity production is the most entrenched). As these holdings cannot productively support the total labour force of a family of 5 (the average size of a family in Algeria is well over 5 persons), they tend to become a labour pool from which are drawn seasonal and/or permanent agricultural workers in the agricultural sector on the one hand, and rural migrants on the other. The labour intensity on such holdings tends to depend on the outside occupation of family members. Generally speaking, the time spent on these micro parcels is determined by the time left over from outside occupations.

The other fraction of this farming system, small farming, constitutes a second complex category which combines elements of subsistence farming as well as average farming (11). Part of the small holdings share the same characteristics as those of the micro holdings, particularly in view of the quantity of labour spent on the farm. Labour employed is determined by the comparative income returns outside and inside the farm unit on the one hand, and the degree of employment of the family members outside the farm on the other. The existence of outside labour reflects in that sense the inability of such plots of land to guarantee simple reproduction of household members. In themselves these conditions only breed the proletarianisation of peasant producers. The average size of small holdings, excluding landholdings with less than 1 ha, has tended to decrease overtime: 4 ha in 1950, 4.3 ha in 1964, 3.8 in 1972 (12). This result was achieved by a more proportional increase of farm units (22.3% between 1950 and 1972) than of farm area (17.2% for the same period). Beyond the uncertainty of the available data, the absolute increase in the area covered by small farms seems to have resulted from a decrease in the absolute size of the micro-holdings (not easy to assess on the basis of present data), as well as a result of the land acquired from other

categories of farms. The subsistence sector and small farms, make up for the majority of farm units and the small proportion of farm area.

Table III.2. 6: Weight of subsistence agriculture in the private sector (by number of farms and farm areas in ha).

Year of reference	Number of farms as a % of total farms	Farm area as a % of total area
1950	69.5%	18.7%
1965	72.2%	22.6%
1972	79.1%	30.0%

Source: Ibid.

With less than 1/3 of the total area, this sector represents nearly 80% of total farms (if one takes into account the missing 2 million ha and integrate them in the total agricultural sector, the farm area of this sector will be drastically reduced to only about 20% of the total area). Another feature of small farms is the poor quality of their land. 65% of these farms were situated in areas such as hills, mountains etc., which by definition were most prone to the adverse effects of wind and rain streaming erosion. Given the economic conditions prevailing in this sector, it is widely accepted that a 10 ha of non-irrigated land is just enough to secure a living at a subsistence level. These units tend therefore to cater mainly for the subsistence needs of their owners, and they are not essentially market oriented when dry farming is the only possible alternative (according to the 1968 Survey, about only 27% of the total irrigated land of the private sector were located on the small farms). Labour employed on these farm units is essentially of a family origin as the size of such plots is largely exceeded by the working capacity of the household unit (13). According to the 1973 agricultural survey, the number of households on this domestic sector was 570,046 or 78% of households in the private sector. If one takes into account the members of households working on farm units (1,078,381 or 70% of all employed domestic household members), it is well over 76% of the household members of the private sector who were employed by the domestic sector (14).

Table III.2. 7: Distribution of working household members (U = 1,000).

Category of farm	Total working Household members	%	Household members working outside their farm	%	Household members working on the farm	%
0-10 ha	1,531	78%	452	82%	1,078	77%
10-50 ha	385	20%	90	16%	294	21%
50 ha +	37	2%	6	1%	308	22%
Total	1,952	100	0.5	100	1,403	100

Source: "Recensement Générale de l'Algérie". 1972. Quoted by S. Bedrani . Op. Cit. p. 190.

On the basis of such figures (15), the ratio of the farm area of the domestic sector per household member employed, gives 1.5 ha per working member. In the absence of an irrigated cultivation, such a ratio cannot provide for sustained economic viability of these farming units. Such a prospect is more likely to face the smallest economic units. The land distribution being of an unequal nature, those units with an average area closer to the 10 ha limit will experience a more viable farming. Given the poor quality of the land, domestic farming is mainly a sector of cereal farming, a purely subsistence practice. In 1968 87% of properties with less than 5 ha devoted 77% of their agricultural land to cereal production and land which remained idle, only represented 10% of the total area. According to the 1968 Survey the domestic sector produced 35% of hard wheat and 33% of soft wheat of the private sector. This amounts to about 5.8 quintals/ha. In terms of physical output, such a yield represents about 9 quintals/household member in the domestic sector (for a ratio of 1.5 ha/household member). At 1980 cereal prices (AD 100/quintal), the output per worker represents an annual income of AD 900 or the equivalent of a bit more than 1 pound of meat per month at current retail prices. Supplementary incomes have of necessity to be looked for outside the production of cereals alone (within as well as outside the farm unit itself when alternative productions do not meet the economic conditions of reproduction of the household units), if the household is to guarantee the reproduction of its members. Livestock breeding provides for such an alternative. According to the already mentioned 1968 Survey, 51% of the cattle of the private sector belong to farm units between 1 and 10 ha. Small holdings with less than 1 ha own 4.5% of the private sector cattle. The domestic sector controlled about 55% of all cattle. One of the factors which

explains the paradox between the un-correlated relation between a marginal land base and the size of livestock, is to be found in the mode of livestock rearing characterised by a clear cut divorce between the private ownership of livestock and the land base of its production: the collective grazing land, amounting to .35 million ha, is free of access, i.e. free of any form of payment of ground rent (16). But this asset was far from being equally owned, and its distribution is rather an illustration of the degree of social differentiation among the peasantry.

b.The average farms.

This type of farm lies in between the lowest (up to 10 ha), and the biggest farm units (50 ha and above). With this classification the characteristics of the types at each end of the sector are bound to overlap. In concrete terms, a clear cut subdivision of size cannot be a very rigorous approach. But the intention however is not so much the limit beyond which one form of farming is different from another, or overlaps with another one, but the subdivision of the overall farm units into essential forms of farming. The situation of average farms evolved as follows: 19 ha on average per farm in 1950, 25 ha on average per farm in 1965, and 19 ha on average per farm in 1973. Up to the late 1960s, these farm units controlled more than half the agricultural land of the private sector with only 1/4 of the total number of farm units.

In absolute terms, their size tended to undergo a decrease similar to the pattern of movement within the PS itself. The question as to whether such a sector did undergo any fall at all remains open. Compared to small farms, these farms can support, because of their large size, a higher proportion of labour force. It is in this category of farms that one finds the tendency to produce for the market. These farms employ about the same proportion of family members as small farms. The high ratio (6.6 ha/household) enjoyed by this category of farms only allowed for the employment of 3/4 of the household members. The contradiction between the availability of agricultural land and the non full employment of household members can be explained according to different situations. Land is unequally distributed and so is that of household members. With a

concentration of the landed property, the economic use of land produces specific and different patterns of labour utilisation well beyond the scope of family labour, full employment of the total family labour force exceeds the possibility of the farm units, Extensive methods of cultivation restrict the use of family labour, etc.

The land of average farms tends to be of a better quality (50% of its agricultural land are composed of plains, and 18% are located on plain/hills). This factor, coupled with the average size of a farm unit (19 ha), makes this sector in principle prone to efficiency. The 1968 Manpower Survey showed that these farms accounted for 39% of wheat production of the private sector, roughly corresponding to a yield of 5.3 quintals/ha (the proportion of land allocated for the production of cereals represents 68% of the farm area). Such a performance represents an annual income of 48 quintals/working family member, or about AD 4,800 or a gross income of AD 400/month (17). On the basis of the 1968 figures, and as far as the main staple food product is concerned, small farms appear however to display a greater yield (5.8 quintals/ha) than average farms (5.3 quintals/ha). Given the fact that the quality of the land of the former is of lower standard than that of the latter, one has to admit that the amount of labour spent on small farms is more productive than that spent on average farms (all other conditions of production being equal).

If one looks at the trend in the number of average farms there appears a net downward tendency, an indication which suggests a certain degree of land concentration (on the assumption however that the parallel movement of farm area as indicated by the official data, be interpreted with all the reserves that have already been raised). If our assumption holds, the unequal distribution of average farms - and therefore the concentration of property - is based on a pattern of extensive methods of production. Moreover, beyond a certain level, and given the existence of certain relations of production, the ownership of land does not become the direct condition of farming but rather a source of a rent. On this point, the 1972 general survey of agriculture shows that 30% of average farmers hold outside farm activities (66% of which were non-wage activities). For 30% of farmers, land had therefore ceased to be the main activity.

By comparison, the proportion of small farmers engaged in outside activities represented 33%. The nature of such activities was not identical for the categories of leavers. The reason of those engaged in activities outside their farm does not have the same significance and/or the same weight, depending on whether one is dealing with farmers leaving too small a farm, or large enough farms. Thus, as against 66% in the case of average farms, the proportion of small farmers with outside activities, but engaged in non-wage professions, was only 22% while those in wage earning activities represented 78% (against 34% in the case of average farms). This clearly shows that the degree of pauperisation and therefore of proletarianisation - the former providing the way for the latter - is more advanced for the category of small farmers and subsistence small holdings than with average farms. If in the case of the latter one tends to deal more with the case of absentee landlords, in the case of the former one tends rather to deal with the social category of rural poor and near landless.

c. The big farms.

Over time, the number of big farms dropped by over 50%, going from 25,070 in 1950 to 13,174 in 1973. As seen earlier, this trend has probably accompanied a parallel movement of land concentration. With less than 2% of private farms, the share of big farms area extended over 23%. These large units tend on the whole to be well located: 63% of them were situated on plains and hills. Their average size fluctuated according to rather contradictory findings: 112 ha in 1950, 94 ha in 1965 (-84% between 1950-1965), 189 ha in 1968 (+201% between 1965-1968) and 96 ha in 1973 (-51% between 1968-1973). Most findings had their shortcomings. The 1968 Manpower Survey undervalued the land area of the private sector by well over 1 million ha compared to the 1965 and 1973 figures. In turn the General Census of 1973 and the 1965 Survey undervalued the size of the private sector by well over 1 million ha, when compared with the 1950 figures (18). With the minimum estimate (94 ha), and maximum estimate (189 ha), big farms tend to be at least 4 times and 9 times larger respectively than average farms. On the ground, such a natural comparative

advantage did not result in any significant economic superiority. With about 62% of land put into cereal cultivation and while enjoying the best land distribution, prone in principle to large scale, farming and economies of scale large farms only produced respectively 26% and 28% of hard and soft wheat. In terms of cereal yields per ha, these farms produced about 5 quintals of cereals in 1968. If the relationship that exists between the size of a farm and its performance, as displayed for instance by average farms, was applied to large farms, this transposition would have resulted, given the minimum estimate, in large farms producing at least 4 times more cereals, or the equivalent of 20 quintals/ha. In the absence of such a significant contrast, what the comparison between the three main categories of farms however shows is that yields have instead tended to fall (though not very significantly in absolute terms) when the size of farms increased (19). At best, no significant difference exists between the three main categories of farms when looked at from the stand point of cereal production, a commodity which remains by far the largest crop, both as far as total agricultural output is concerned, and as far as agricultural land use goes. Though naturally large farms are close to capitalist units, particularly since they tend to rely on wage labour and produce for the market, the context in which they operate, and/or the farming methods along which they operate, do not seem to be conducive on the whole to producing performing units (low yields, under-equipped, relatively low contribution to agricultural production etc.). A further comparison between the different types of farms on the basis of other resource endowments, seems to confirm such characteristics (20).

C. Resource endowment of the private agricultural sector and farming practices.

The 1968 Survey shows that large farms remain on a whole less equipped than middle farms, or experience a very insignificant livestock activity (they hold the same size of cattle than smallholders with plots of land smaller than 1 ha) (21).

Table III.2. 8: Distribution of selected fixed factors of production by size of farms.

Categories of farms	Tractors %	Harvester-threshers %	Lorries %	Other equipment %	cattle %
≤ 1 ha	0 %	0 %	4 %	0 %	4.5%
1 ≤ X ≤ 10 ha	12 %	5 %	36 %	16 %	51.0%
10 ≤ X ≤ 50 ha	51 %	43 %	20 %	48 %	22.0%
50 ha +	37 %	52 %	16 %	24 %	4.8%
Total	100	100	100 *	100	100

Source: Manpower Survey in the private agricultural sector. MARA. 1968. quoted by S. Bedrani op.cit. p. 288.

Except for harvester-threshers, capitalist farming remains under-endowed for all items of resources (22). The case of lorry distribution reveals that small farms control as many as average and large farms. This is probably an indication that a rich stratum of small peasants was involved in the business of marketing and trading of agricultural products. Farming practices, as a reflection of the mode of use of agricultural land, remain on the whole identical for the three categories of farms. Like subsistence and family farms, *latifundia* farms experienced the same pattern of cultivation and specialised in the same crop.

Table III.2. 9: Distribution of crops by class area (23).

Crops	Less than 5 ha	5 to 20 ha	20 to 100 ha	Over 100 ha	Over 200 ha
Cereals	77 %	75 %	62 %	61 %	62 %
Fallow land	10 %	20 %	33 %	22 %	28 %
Other crops	13 %	5 %	4 %	16 %	10 %
Total	100	100	100	100	100

Source: Ibid.

The proportion of land used for cereals represented in most cases well over 60%. But if one looks at a more relevant proportion, i.e. the proportion which is *de facto* monopolised by cereal production (including land that was kept fallow), it is well over 80% and 90% of the land which goes to cereals alone.

In itself, it is not so much the fact that a high proportion of land is used for cereal production that makes for the problem of production inefficiency. The main problem is

that land is still exploited along traditional farming methods. A more intensive cultivation based on a rotation combining say, cereals/pulses or cereals/fodder, etc. has not taken over the more traditional rotation of cereals/fallow (hard wheat remains the predominant crop). While the former cultivation fixes more nutrients into the soils, and therefore increases its natural fertility, the latter rather accentuates the degradation of the soil and contributes to low yields (24). The reproduction of extensive monoculture does not obey the same logic. Cereals are by essence the staple food of the population *par excellence*. As such they weigh more in the crop pattern of small farms than in capitalist units. This explains why the proportion of land under cereal cultivation is higher for the former than for the latter. Unlike large units which produce for the market, small farming units produce for on farm consumption. The prevalence of extensive monoculture in latifundia farms, and on a fraction of average farms, may have been influenced by several factors.

The policy of fixed prices has been pursued in a systematic fashion. As such, up to the 1970s cereal production prices had not undergone any significant change as shown by the following table.

Table III.2. 10: Trend in the cereal production price index (1963=100).

	1963	1968	1969	1970	1971	1972	1973	1974
Hard wheat	100	100	108	108	108	108	118	118
Soft wheat	100	100	106	106	106	106	108	108
Barley	100	100	105	105	105	105	105	105

Source: S. Bedrani. Op. Cit. p. 148 (for the period 1963-74) and G. Muttin. Op. Cit. p. 57 (for the remaining period).

For a decade, cereal prices did not undergo the change which might have transformed them into an incentive to increasing production by way of intensive methods of farming (25). The policy of staple food subsidy, the massive state intervention on cereal imports, the state control of domestic consumer cereal prices etc., all contributed for their part to freezing producers' prices. The huge industrialisation programme launched in 1967 created new immediate opportunities for private capital in urban areas. In particular this new situation meant higher capital returns outside

agricultural activities. As an important fraction of landowners engaged in non-agricultural activities, the phenomenon of absentee landlords was reinforced, and so was the tendency of the flow of resources from agriculture to non-agricultural activities. The main category of such resources was represented by absolute ground rent, an appropriation of resources enabled by the private form of land property. Moreover, as this rent was received outside agriculture, it has also tended to be spent outside the agriculture sector. In terms of agricultural investment, the appropriation of ground rent and its allocation through consumption, investment and savings in exclusive urban activities, meant that the necessary resources required for the reproduction (whether simple or extended) of fixed factors of production (land, capital and other intermediate consumption goods) have probably not been met in the agricultural sector.

The nature of the land tenure system, or the mode of land exploitation, also contributed in its own way to the enhancement of such a situation, the perpetuation of which maintained private agriculture in a relative state of stagnation. From the stand point of the dominant relations of production which determine both the mode of farming, as well as the terms under which the agricultural surplus is appropriated, the overall pattern prevailing in the sector can be depicted as follows.

Table III.2. 11: Distribution of agricultural land according to the land tenure system (%).

	Direct mode of exploitation	Rent farming (Owner-occupied)	Sharecropper (tenanted)	Khamassat (26)	Total
≤5 ha	76.7	11	11	1	100
5-50 ha	66	18	11	4	100
50 ha+	65	23	5	7	100
Total	67	18	10	4	100

33 %					

Source: Manpower Survey. 1968. Quoted by S. Bedrani. Op. Cit. p. 292.

If so far one has assumed that farmers were owners, this table shows the extent of the difference between the two status. On average 67% of the land was directly managed by its farmers/owners with the highest proportion located on smaller properties. If one

looks at the distribution of large farms, it appears that 35% of them were not run by their owners (the distribution of agricultural farms by mode of tenure system does not however reveal the corresponding area distribution). Moreover, among those farms categorised as farms run by their owners, one ought also take into account the category of land under joint ownership (in 1968 21% of land was under the legal regime of joint possession). It is therefore very likely that part of the 65% of farms run by their owners/farmers contained land which in effect partially belonged to "absentee" landlords (27). Furthermore, if one bears in mind the fact that, because of their non-intensive farming, large farms leave 30% of their land idle each year, because of this farming practice, and because of the pattern of land tenure, on average well above 54% of the land was not *de facto* exploited by big landowners in 1968. For the whole private sector, land not *de facto* farmed by its landowners because of idle land, and because of the land tenure system, represented on average 48%, or about 2,024,593 ha, in 1968 (28).

Under these conditions, and at this stage, the private agricultural sector appears therefore as a sector with a high proportion of urban-based absentee landlords (absenteeism being defined in relation to their presence in the immediate process of production), with 1/3 of the agricultural land directly managed by non-landlords (beyond such facts there remains room for the qualitative appreciation of the nature of the land under indirect farming). A great difference however, both social and economic, exists between the peasant who leaves his land because it cannot support him and his family, and the average and/or big landowner who leaves his land precisely because it does support him and his family. In the first case one is dealing with near-landlessness, in the second case one is dealing with absentee landlords as well as with the specific mode of appropriation and utilisation of agricultural surplus. In view of a stagnating sector, the existence of an important fraction of absentee landowners, and the amount of ground rent that accompanies it, becomes the visible sign of the amount of resources drained out of agriculture (besides that operated by prices and marketing intermediaries). The cumulative effects of such a situation are that less investment is

likely to be made available at farm level (ground rent is spent outside agriculture in urban areas), non-intensive farming techniques are reproduced, employment opportunities become relatively or absolutely scarce, the tendency towards agriculture and rural migration increases, agricultural production stagnates or decreases, and the market for industrial products cannot expand, etc. The normal condition of reproduction of agrarian capital at farm level therefore undergoes restrictions and limitations. According to the 1968 Manpower Survey, the payment of ground rent represented 25% of total cost per ha (29). In other words, 1/4 of the agricultural "cost" of production and, in consequence, the corresponding value which would have accrued to the direct producers and/or the capitalist farmer was appropriated by absentee landlords. In terms of market price formation, the existence of ground rent implies its "inflation" in order to account for the remuneration of landed property. Unlike differential rent, absolute rent "can only be a charge, levied by the landowner, on the existing mass of values" (30), a reduction for the capitalist farmer who does not own his land, on the amount of resources available for agricultural investment, a reduction of his profit. This situation epitomises well the extent to which such a form of private property can stand as a barrier to agricultural development. As K. Marx put it: "here, in agriculture on a small scale, the price of the land appears as a barrier to production itself. In agriculture on a large scale, and in the case of large estates resting upon a capitalist mode of production, private ownership likewise acts as a barrier, because it limits the tenant in his investment of productive capital, which in the last analysis benefits, not him, but the landlord" (31). The first Algerian attempt to do away with such social barriers found its embodiment in the Charter of Agricultural Revolution in 1971. But before going into the analysis of agrarian transformations and their effectiveness, let us first study the employment side of private farming and the performance of the sector in terms of overall output.

D. Production performance of the PAS.

The global picture of production structure is summarised as follows.

Table III.2. 12: Trends in the main agricultural products of the PAS. (1966/67=100).

Crops	1967	1969	1971	1972
Cereals	100	120	104	146
Pulses	100	117	137	101
Market- garden	100	128	165	159
Industrial crops	100	307	755	475
Fodder	100	120	134	98
Citrus fruits	100	120	134	98
Olives	100	80	136	142
Dates	100	96	107	108
Figs	100	48	115	42
Other fruits	100	95	103	83

Source: Annuaire Statistique de l'Algérie. 1978. P. 223.

The trends in production levels have been erratic and fragmentary. The most significant upward trend has been for industrial crops. For market-garden products, citrus fruits and olives, the trend has been too volatile to fit any upward or downward trend. The performance of the private sector is however better depicted in terms of yields, in order to take account of the land-related output variations.

Table III.2. 13: Pattern of yields in the private sector for 5 main crops (U= Q/HA).

	1966	1968	1970	1972
Cereals	5.5	5.4	4.9	5.5
Pulses	5.4	5.0	7.0	5.3
Market-garden products	57.5	57.5	65.4	58.0
Industrial crops	25.5	20.0	52.5	40.6
Citrus fruits	76.0	87.0	95.0	97.0

Source: Ibid.

Of all products, only fruits displayed a constant positive growth. The highest gains in yields remained substantially that of industrial crops. For cereals, pulses and market-garden products, the erratic changes, remain an indication that output was not under efficient control. For cereals and pulses, the average yearly yield during 1966/72 had been 5.5 and 5.4, respectively the levels of yield prevailing in 1966/67 (the case of industrial crops is special as they are the most unstable of all crops. Their erratic fluctuations are a direct reflection of the effects of the shift of emphasis introduced by the State policy (36) of intervention (see Part IV Chapter II). On the whole, and with very few exceptions, yields therefore tend at best to be constant. In terms of meeting

the food requirements of the population, which also happens to be one among the fastest growing in the world (over 3%), such poor agricultural performance raises the question of the status of the agrarian structures themselves. In particular, it is the nature of the relations of production within such a sector which is at issue. Indeed such relations tend to regulate, in the last analysis, the mode of organisation of the production process and the mode of distribution of the agricultural product between wages, ground rent and profit, as well as the mode of reproduction of the constitutive elements of the production process (the level of re-constitution of all fixed elements of capital and their mode of combination, the level of re-constitution of the labour force and its skill). A clear assessment of the employment situation in the PAS will help highlight this point.

E. The employment situation in the private agricultural sector.

Given the predominance of extensive farming, employment opportunities will depend mainly on the size of the farm unit. In turn the nature of the size of the farm unit determines the structure of agricultural employment. In particular, with small farms, the proportion of outside workers as well as that of permanent workers (32) tends to be negligible. As the size of the farm increases, so does the proportion of permanent and seasonal workers (the proportion of the family labour becoming relatively scarcer). Three main categories of farm workers can be distinguished: permanent workers, temporary workers and 'family helpers'. According to the 1968 Survey, the agricultural employment situation was as follows (33).

Table III.2. 14: Agricultural employment (U = 1,000).

	Permanent workers		Temporary workers		Family helpers		Total workers + family helpers	
	Number	%	Number	%	Number	%	Number	%
0-5 ha	3.4	1%	69	20%	272	79%	345	100
5-50 HA	13.0	2%	379	58%	262	40%	654	100
50 HA+	6.0	10%	45	76%	8	14%	59	100
Total	22	2%	493	47%	542	51%	1,058	100

Source: S. Bedrani. Op. Cit. p. 291.

If one looks at the proportion of workers, this category was the highest for large farms. With 86% of permanent and temporary workers, they displayed a characteristic typical of capitalist units. But if these units employed a majority of workers, their overall contribution to agricultural employment was however insignificant.

Table III.2. 15: Share of farm employment.

	Total number of workers + family helpers	Percentage
0-5 ha	345,150	32.0%
5-50 ha	654,459	62.0%
50 ha +	58,890	5.6%
Total	1,058,499	100

Source: Ibid.

With 31% of total private agricultural land, large farms contributed to only 5.6%, or 1/18 of total agricultural employment (34). If one takes into account other agricultural activities not strictly related to farms units (such as livestock activities, apiculture, etc.), the state of agricultural employment is altered in the following manner.

Table III.2. 16: Distribution of total employment in the PAS.

	Total number of workers + family helpers	Percentage
Non-farm employment	83,187	7
0-5 ha	345,150	30
5-50 ha	654,459	57
50 ha+	58,890	5
Total	1,141,686	100

Source: Ibid.

Average and small farms make up the bulk of the agricultural population (87%) as well as the bulk of permanent and temporary workers (88%). If one retains the limited definition of active population, the later can be estimated at 1,411,536 (35), for a total agricultural population of 6.5 million (i.e. 22% of total agricultural population). If the total agricultural sector consists of about 1 out of every 4 Algerians outside urban areas, it is however the PS which makes the overall contribution (81%). This situation is in itself a reflection of the overwhelming weight of the small and

average farm categories which accounted for 95% of occupied within the PS and 77% within the total agricultural sector. However restrictive the definition of the Algerian active population may be in assessing the extent of the rate of agricultural employment, it is however the functional distribution (i.e. the economic significance) of the occupied population which can alone reveal its main employment characteristics.

CONCLUSION: Rural poverty and the need for an agricultural reform.

As perceived by the Algerian policy makers, the access of poor peasants to the status of owners (collective and/or individual) was considered to be a preliminary step in order to achieve the necessary production increase (here the perception of agrarian change, to achieve the increase in production, is perceived in combination with a parallel alleviation of rural employment). Moreover, the perception of land reform, mainly confined within the limits of the private agricultural sector, was also seen as the ultimate means towards the eradication of rural poverty. The specific study of the extent of rural poverty and the volume of land available through the programme of land reform will allow for a more realistic assessment of the change brought about by the Algerian land reform. Before attempting an assessment of the extent of rural poverty, let us in anticipation, assess with R. Sinha the limits contained in the narrowly defined conception of Algerian reform equating rural poverty with lack of land or its insufficient availability: "If employment opportunities outside the agricultural sector cannot be created at a sufficiently rapid pace to absorb the massive increases in the labour force, there is no realistic alternative to a meaningful redistribution of land" (37). What determine also the extent of a reform is also the extent of rural poverty itself. This is not to say that by itself poverty creates the need for a land reform; the resolution of poverty via a programme of land reform is also largely determined by the nature of the contradiction that the development of capital imposes to the ruling class, in other words, and as put by C. Kay, a "land reform has to be analysed in the context of the class struggle for power" (38).

Broadly defined rural poverty embraces landless and near-landless peasants (39). They automatically include those peasants on the edge of landlessness, i.e. the proprietor with a plot of land smaller than 1 ha (in 1973 their number amounted to 155,991). The other fraction of the peasantry which enjoyed a larger but insufficient proportion of land, is more difficult to assess given the currently available data. The (1-10 ha) properties are not of the same quality (the distribution of irrigated land is not easy to assess), and they are not evenly distributed among peasants. These two

categories of peasants, and the strictly landless peasants, can however be considered from the point of view of the profile and the level of agricultural employment.

The category of employed includes the full-time farmers, the permanent workers in both the SMS and the PAS, the seasonal workers in both the SMS and the PAS, and the family helpers plus those with an "undetermined" (40) status (to use the same jargon as the data gathering institutions). The first category represents the self-employed and as such they do not enter into the category of rural poor, but all other categories however enter into the definition of landless and near-landless (full and part-time agricultural workers are by definition proletarianised peasants because without land or an insufficient land). According to the 1968 Manpower Survey, the occupational situation of the agricultural labour force in the two sectors concerned 1,426,107 persons distributed for 81% (1,156,256) in the PAS, and for 19% (269,850) in the SMS. By category, 12% were permanent workers, 43% part-time workers, and 45% "undetermined" and/or "family helpers" (the notion of "Undetermined" and/or "Family helpers", is basically used to designate the same social category as used for the unemployed; the former being mainly used in the official terminology when referring to the SMS, while the latter is essentially used with reference to the private sector (41). A more detailed comparative distribution of employment between the two sectors reveals in turn the structure of employment in each sector, as well as the overall nature of such employment.

Table III.2. 17: Comparative sectoral distribution of agricultural employment (%).

	Private sector		S.M.S		Total	Structure of total agricultural employment (%)
	%	%	%	%		
Permanent workers	21%	3%	79%	49%	100	12%
Seasonal workers	80%	43%	20%	46%	100	43%
Family helpers and undetermined	98%	54%	2%	5%	100	45%
Total 1 (structure of each sector)	100		100			
Total 2 (relative weight of each sector)	81%		19%			100

Source: Computed on the basis of the 1968 Manpower Survey.

With 81% of the total agricultural work force, the private sector employs over 4 times as many workers as the SMS (42). This sector appears to be the largest employee, but only if looked at from a quantitative approach. The study of the inter-sectoral distribution of this workforce reveals the economic nature of agricultural employment on the one hand, and the economic implications it has on the Algerian economy in general and on the programme of land reform in particular. The main characteristic of the workforce employed in the private sector is the predominance of the category of temporary workers and family helpers, representing 98% of the private workforce (this compares with 22% in the SMS). As far as agricultural employment goes, the main difference between the two sectors is therefore the weight the permanent workforce represents in each case: 3% in the PAS and 49% in the SMS.

The overall result is that the SMS employed 79% of the total permanent workforce. The second characteristic of agricultural employment, and by far the most important, is that it is for the most part a non-permanent workforce (88%). The share of the private sector in the employment of a non-permanent workforce is the highest with 98%, as against 11% in the SMS. It is precisely this category of worker (well over 1.2 million) that best epitomises the rural poor. Temporary workers are underemployed workers for most of the year. According to A. Benachenhou, in 1972, 65.4% of seasonal workers worked less than 1 month, while 22.3% worked for a period of between 1 to 3 months. If one excludes the "family helpers", and the "undetermined", the contribution of seasonal workers represented 78.5% of the total workforce. The category of "family helpers and the undetermined" in fact represents the agricultural unemployed, or more precisely the unemployed fraction of the active population related to the different categories of household farms. Moreover this category of unemployed bears the effects of migration: it is already deflated by those who abandoned agriculture (in retrospect the release of workers from the countryside only "hints" at the underlying economic forces at work which generate them in the open). In this respect the cumulative past

flows of migrants are a more accurate way of assessing the way rural poverty expresses itself: 17,000 migrants per year for the period 1966/68; 40,000 for the period 1968/70; 80,000 for the period 1970/73 (43). The category of non-permanent workers represents therefore what was left of the landless and near-landless peasants: in other words the majority of the active population. They represent a perfect illustration of the reserve army in perpetual search for job opportunities. If the 1971 land reform is to be assessed at all, it can only be according to its ability to change the precarious economic situation of those who are unemployed and/or underemployed and, by definition, cannot be employed in urban areas where labour opportunities (particularly for unskilled workers) are scarce and competition among the unemployed is high. The extent to which the programme of land reform has been able to meet the challenge is assessed in the following chapter.

Notes

1-Given the context of the 1960s, the SMS was more the creation of the prevailing political circumstances than the expression of the will of the new ruling class. The massive departure of the French colons was neither foreseen nor represented in itself the ultimate objective inscribed in the political programme of the different warring factions for independence. The political programme of 'national liberation' did not contain any specific reference to a nationalisation of the land of the settlers.

2-As stated in Part I of this thesis, beyond this form of collective ownership, land was worked on an individual basis. The private ownership of land in the capitalist sense of the word - that whose counterpart generate the payment of rent - did not exist as such at that time. The predominance of patriarchy as a dominant form of social organisation guaranteed the pre-eminence of the collective form of land ownership.

3-Given these historical conditions, the distinction between the "modern" (European) sector and the "traditional" (indigenous) sector becomes ideologically tainted when modernity is in fact opposed to backwardness. In those terms the dualist distinction is certainly false and scientifically unsound.

4-If the problem is a *prima facie* a statistical problem, it remains however basically an economic one as well as a political one as it will be seen.

5-We deliberately use the official term to characterise the agrarian transformations of the 1970s. The appropriateness of the term and the conditions under which it can be used will be discussed when the study of the 1971/72 measures will be undertaken.

6-At that time the colonial agricultural sector has by far and large reached its definitive size as the process of land appropriation and land concentration was well over.

7-One remains doubtfully whether the choice of such a particularly sensitive time was most suitable to a census on the private sector. In the absence of an up to date cadastral survey and given the imminence of the AR, the information given by the landowners as to their property and its extent were doomed to be unreliable since attempts to

underestimate their property is quite justifiable from their interests point of view.

8-In this respect it can be said that big landlords have long been prepared to the prospect of being nationalised. As will be seen, their efforts to avoid the cost of such an operation have been more than rewarded.

9-The existence of a "ghost" sector of 2 million ha questions and challenges the whole validity of data gathering bodies in Algeria. The omission on such a large scale goes well beyond the sole aspect of statistical errors. In fact it calls for a political rather than a technical explanation.

10-The size of these units can be determinant, and one ought not forget that, historically speaking, the distribution of agricultural land, and therefore of farm units, was itself the result of an unequal economic power. If a given economic power guarantees the ownership of large holdings, in turn, large farm units tend to reproduce and extend this original economic power.

11-It is off course impossible to assess such differences on a statistical basis, and one has to rely on a qualitative analysis.

12-A survey conducted by MARA The Manpower Survey in the private sector in 1968 tends to confirm the 1972 figure. Though the average size of a small farm was 4.3 ha, the overall trend, as confirmed by the 1968 Survey, and the 1972 Census shows a decline in the number of ha per farm unit.

13-From that point of view this sector, with the subsistence, can better be termed as the domestic sector or the farming sector.

14-Here we are only talking of the occupational activity of the household members of farmers. Landless peasants as representing the non-household approach is not given by the present data. For its part, the household approach does not allow for the total assessment of agricultural employment. As to those household members who were employed on the domestic sector, there is a need to distinguish between the permanently employed, the temporary employed and the family helpers.

15-These figures ought to be taken with some reserve as they seem to conflict with other sources. This point will be taken up in due time.

16-The overall pattern of livestock ownership was illustrated by the situation

prevailing in the Wilaya of Saida in 1974 where 8.9% of cattle breeders controlled 44.3% of herds. Revue Statistique Agricole N° 14, April 1974, p. 96 quoted by S. Bedrani op.cit. The development of extensive livestock breeding raised concerns about the necessity to protect the ecological environment and limit the power of cattle breeders. Such an objective became in itself part of the AR programme of the 1970s.

The distribution of livestock as related to the domestic sector, is however misleading in view of the fact that 55% of cattle belonged to the 1-10 ha farms. One important feature of the private livestock activity in Algeria is that it is an extensive activity, i.e. not correlated to the land base of the domestic sector, particularly when large herds are concerned. Extensive livestock breeding as related to the size of the farm units of the domestic sector, is very limited by definition. The power of large livestock breeders, though correlated to the domestic sector, is in fact dependent on the free use of the large public pasture land.

17-The gross agricultural product is not off course distributed evenly among participants of the same household on the one hand and between farmers of unequal size on the other.

18-Such open contradictions confirm in their own way the fact that a whole sub-agricultural sector still remains outside the current assessments of the size and the structure of the private sector.

19-With the necessary reserves of accuracy concerning the 1968 findings. Since that date, no similar survey has been carried out yet.

20-It is necessary to add that the non transformation of a concentrated scarce resources - which land is - into efficient productive use amounts to a waste of economic and social resources. As poverty is a social phenomenon related to inequality the preservation of an unequal land distribution is a preservation of poverty itself.

21-As seen earlier, the contradiction between the private ownership of livestock rearing and the social free use of pasture land, blurs and eliminates at the same time the link between the land base of cattle rearing and the actual size of livestock.

22-The fertilisers consumption per type of farm is not known to us. The private sector remains on the whole underprivileged. With 60% of agricultural land it only used 28%

of total fertilisers consumption in 1978.

23-This distribution could not have been presented in the standardised class area which so far have been used.

24-Before land is left idle it is first ploughed. This cultural practice therefore puts land at the mercy of natural elements. Under the influence of rain and wind, most nutrient elements which are on the surface of the soil are therefore washed away. In the absence of fertilisers, the traditional rotation of cereals/fallow land, corresponds to a mining agriculture whereby the nutrient elements are taken away from the land and not ploughed back.

25-The reproduction of extensive farming methods is also a reproduction of the conditions not conducive to increased agricultural employment opportunities.

26- As previously seen (chapter I), Khamassat (literally speaking referring to a 1/5 share) is a form of sharecropping whereby the sharecropper (Khammass) gets 1/5 of the net product. Most Khammass, because of their indebtedness *vis-à-vis* their landowners, got tied to the latter. These debts bonds which were also reinforced by the strength of the patriarchal power (epitomised precisely by the landlords) produced generations of Khamess.

27-In the present circumstances it is not possible to assess this particular point.

28-The method of cultivation was as follows:

Total agricultural land of the private sector(1968) = 4.2 million ha

Total idle land = 953,904 ha (i.e. 22.4% of total land).

Land under direct cultivation =2.8 million ha (i.e. 67.6%).

Estimated proportion of idle land in the sub-sector under direct cultivation= 644,839 ha (estimated on the basis of the proportional weight of the sub-sector under direct farming (76.6%) and the weight of the sub-sector under indirect farming (32.4%) in the total area of idle land). By deducting the corresponding idle land from the total land of the sub-sector under direct farming one gets the total land which is *de facto* farmed by its owners, the rest representing the 48% in question. Such findings are only valid in so far as they relate to the 1968 figures and in so far as they relate to average

estimates.

29-Quoted by S. Bedrani, *ibid.*, p. 311.

30-JariusBanaji. Summary of selected parts of Kautsky's The Agrarian Question. Economy and Society. Volume N° 5. 1976. P. 21.

On the point of distinction between differential rent and absolute rent, K. Kautsky further writes "The first category [differential rent] does not, unlike absolute rent, enter into the determination of the prices of agricultural produce. The former derives from prices of production, the latter from the margin between market prices and prices of production". LaQuestion Agraire. Réimpression en fac-simile, F.Maspero. Paris . 1976. pp. 118-119.

31-K. Marx. Capital. Volume III, Charles H. Ken and Company. 1909. P. 944.

32-The data do not distinguish between family workers and outside workers. In principle outside workers are employed only when the family labour force (be it permanent or temporary) is insufficient because of its size or because it is already employed on better terms elsewhere.

33-Quoted by S. Bedrani L'agriculture Algérienne depuis 1966. OPU. Algiers 1981, p. 291.

34-In actual fact this rate does not include the degree of unemployment of family helpers.. Such a nuance has not been purposefully made at this stage. The 5.6% refers in fact to the weight of the active population of big farms than to the actual level of employment. A more relevant comparison will be made with the analysis of the state of rural employment for the whole agricultural sector, i.e. the SMS and the private sector.

35-1,1412,686 representing the active population of the private sector and 269,850 that of the SMS. Algerian statisticians have a restrictive definition of the active population. In their terms it refers to the male population between the age of 18-59, less a certain rate of invalids, plus those outside this age group who are actually employed, i.e. the young (below the age of 18), the old (above 59) and the employed women. One of the contradictions contained in such a definition is that the female population is excluded from the definition of employment except when it is employed

which is not the case of the male population. When using this method we always end up underestimating the rate of unemployment.

The *de facto* exclusion of women from the definition of the active population reflects their subordinate social status: the number of employed women only represented an insignificant fraction, about 6% and 7% (see N. E. Hammouda, Statistics. ONS. N° 3. Avril/Juin 1984. p. 29).

36-For tobacco production, the price paid to private producers has not changed between 1962 to 1975. The result was the depression of output. The increase in prices after 1975 has led to a slow increase on the tobacco activity. The experience of cotton showed no particular incentive vis-a- is the producers. After the 1970s their activity was abandoned. The private producers will not receive any particular stimulants in the production of sugar beet whose production remained confined to the public agricultural sector. It is in the production of tomatoes that the private proved more dynamic. Generally speaking the development of industrial crops remained influenced by the inconsistency of the state policy in the choice of the product and/or the choice of prices.

37- Radha Sinha. Landlessness: a growing problem. F.A.O. Rome, 1984. P. 6.

38- C. Key Book Review. Journal of Peasant Studies. Volume 4 N°2. January 1977. p. 244. *a* *X*

39-The historical origin of the rural poor was associated with the land dispossession policy conducted by the colonial power.

40-The "undetermined" category of workers is that which is classified as neither being permanent or temporary, in other words it represents the unemployed.

41-See Appendix AIII.2.

42-Beyond considerations pertaining to the relative size of each sector (the private sector controls 70% of total agricultural land), the contribution of each sector ought to be measured in terms of permanent work opportunities.

43- Prenant Prenant. Essai d'évaluation et d'interprétation de la croissance urbaine en Algérie, 1966/74. quoted by A. Benachenhou. Op. Cit. p. 11.

CHAPTER III

THE ALGERIAN AGRICULTURAL REVOLUTION

Introduction.

Caught by the side-effects of an industrial-related sudden increased urban food demand that on the available evidence the domestic agricultural sector was overtly unable to meet, Algeria embarked - a decade after the recovery of her political independence - upon her first major land reform programme. Unlike the experience of self-management which was more the product of historical circumstances imposed on her as a result of the unexpected departure of European settlers - a situation which by itself was well beyond the command or the initiative of the leading social groups - the programme of agrarian transformations was the result of her own political initiative. The programme of Agricultural Revolution (AR) - defined with the aim of metamorphosing the panorama of 'traditional agriculture' altogether and substantially increasing agricultural production through a radical transformation of the land tenure system and the methods of production, the agrarian programme of development of the productive forces was labeled with the intent of such a deliberate radicalism (1) - was somehow thought to have come about after a considerable delay. From 1962 to the end of 1971, landlords were however considered to have been *de facto* preserved in their entire political and economic status (2). In itself the project of Agricultural Revolution still contained an important characteristic: at no point did it involve the participation of those concerned, i.e. the peasants and particularly the rural poor. It was also a typical example of a reform decided upon from the top, a programme devised outside the target population, a project of social change reduced to a set of administrative measures, whose success depended solely on their degree of implementation. These two factors in as much as they affected the nature of the project

itself, influenced the whole process of the development of the AR programme. An appreciation of the contribution that such a land reform is going to produce in terms of its ability to meeting the new urban wage food demand, requires that we first assess the nature of the transformation of the relations of production is has been able to promote. The characterisation of the Algerian "AR" is clearly seen through the brief assessment of its declared objectives.

A. The objectives of the agricultural revolution.

When land reform is considered, its study raises two main issues: the main objectives of the programme of land reform, and the nature of the reform itself, or the terms under which it intends to transform and alter the conditions of production and appropriation of the agricultural surplus by the different social groups, and to whose benefit. Three main objectives can be identified in the Algerian AR.

a. The suppression of absolute ground rent.

This was achieved by abolishing any indirect form of land exploitation and/or land ownership. As the characterisation of land ownership is precisely to "gain control over a fraction of agricultural surplus labour materialised under the form of ground rent" (3) to the benefit of landowners, the suppression of absolute ground rent can be seen as another way of promoting the social category of capitalist farmers at the expense of landowners.

b. The increase in agricultural production.

This goal was thought to be achievable by means of two new forms of farming units: the setting up of a collective form of land exploitation in the form of co-operatives as an alternative to large and/or "absentee" private ownership of land. As private ownership of land was not abolished as such, a new form of private farm unit was imposed through the limitation of large land property. The constitution of average private farms (4) was thought to be most conducive to intensive farming.

c. The elimination of agricultural unemployment.

The setting up of the co-operative sector was thought to be capable of realising such an objective, both as a result of the distributive aspect of land proper, and as a result of the expected development of intensive farming methods of production.

In its unfolding the implementation of the AR went through two main stages. The first stage focused mainly on the constitution of the land fund of the AR proper (the formation of such a "land bank", to use the expression coined by K. Sutton (5), extended however over the two distinct phases of the reform). The second stage of the land reform programme was concerned with the constitution of the AR sector itself (also referred to as the co-operative sector (CS)).

On the whole this agrarian strategy was directly associated with the particular forms under which the new agricultural sector was organised. *Vis-à-vis* the "reformed" private sector, the programme of AR has, in its principle at least, mainly consisted in re-sizing its properties and homogeneising its juridical status.

B. The implementation of the first stage of the agricultural revolution.

The setting up of the land fund of the AR started with the creation of the FNRA (the National Fund for the Agricultural Revolution) which was the legal depository of the land of the new sector. All land destined to the AR sector was first recorded and assigned to this fund. The land assigned to the FNRA originated from two main sources: public and private land. As far as the first category of land was concerned, all domanial and communal land was recovered by the FNRA through the procedure of nationalisations. The 1971 Charter of Agricultural Revolution also "removed ... Habous ... restrictions on land used" (6). A "Habous" land is a land belonging to a religious institution. There were two types of Habous properties: public and private. Public Habous land is a land donated to a religious institution, while a private Habous land is a private land which is simply put under the protection of a Habous authority. Private Habous land becomes public once a donor's line of descendents becomes extinct. The practice of private

Habous land was historically developed in order to avoid the abuses of the systematic policy of land confiscation by the French colonial power. In the context of the AR the public nationalisations of land affected the public Habous land. As far as the second origin of the land of the new sector was concerned, the private land acquired by the FNRA came from two main sources: Land acquired through integral nationalisations, and land acquired through partial nationalisations (the size of private properties was limited via the process of nationalisations).

a. The nationalisation of public land.

The process of nationalisations of public land started in 1971. The acquisition of such a land met no particular social or political resistance as no particular individual economic interests were at stake. The lands belonging to the communes, the Wilayate and public "Habous" land, were all nationalised. During this phase, part of the State land was also affected. It concerned the nationalisation of part of the land of the SMS (7) which was unsuitable for cultivation (difficult access in terms of the farm equipment, too great a distance of certain plots *vis-à-vis* the estate, etc.). The outcome of such nationalisations (December, 1975) led to the acquisition of 1,730,240 ha, a 1/3 of which (600,000 ha) were estimated to be suitable for cultivation (8). The immediate implications of such nationalisations concerned two main social groups. A category of landowners who strengthened their economic power prior to the AR through their ability to rent such a public land (9), and a fraction of the small and landless peasantry who was able to remain on the land only by renting such a public land. In the process of nationalisation the latter social category was not preserved. Another feature of this period (which in effect was politically speaking a preparatory period to the nationalisation of private lands) was the highly publicised campaign for private land donations (10) which, by July 1975, registered 2,685 donations amounting to 823,285 ha, i.e. the equivalent of 5% of the total nationalised public land.

The preparation for the nationalisation of private property was accompanied by the setting up of the administrative and institutional instruments for its realisation at the different levels of executive power: the APCE (the extended communal popular assembly) at local level, the APWE (the extended Wilaya popular assembly) at regional/Wilaya level, the Commissions of appeal of the Wilaya and particularly the CNRA (National Commission of AR), the administrative and political organ responsible for the definition of the programme of AR and for the measures pertaining to all aspects of implementations. Though the APCE (11) was in charge of the direct implementation of the programme of AR (census of the land, implementation of nationalisation measures, distribution of nationalised land etc.), the main powerful organs remained the CNRA and the APWE (for the latter through the power of the Wali who acts as the representative of the State at regional level). Given the formal representation (12) of the system of executive power, the success of the programme of the AR depended very much on the balance of power within the different decision-making organs, between those in favour of the AR, and those against. As K. Sutton puts it, "an opportunity for vested interests to dilute the reform process arose at the outset when an extremely localised body, the *Assemblée Communale Populaire* (APCE), was given powers to prepare lists of landowners, absenteeists, and potential recipients of land and then to carry out the local redistribution of land and other assets ... In some cases large landowners secured dominant influence over APCEs and were able to paralyse or minimise the redistribution of land" (13). The influence of the vested interests of members of the administrative and political machinery in all decision making process concerning AR, was more acute when seen from the viewpoint of nationalisation of private land proper.

b. The nationalisation of private property

The nationalisation of private land was preceded by the declaration of residence of landowners between March and July 1972, as well as by a land census proper between September 1972 and March 1973. In the Charter of AR *absenteeism* of landowners

was a cause of nationalisation, but as pointed out by G. M. Almeyra "the original text [i.e that of the Charter] spoke of landowners who were not exploiting their land, and not of absentee landowners" (14). The actual nationalisations only started during the summer of 1973. As far as the programme of the AR was concerned, the nationalisations of private property were to achieve three main objectives: confiscation of the land of all absentee landlords (only absentee landlords with properties beyond the threshold of 5 ha of dry land, 1/2 ha of irrigated land and 20 palm-trees were concerned), as well as their means of production, confiscate the land and the means of production of all landlords who did not directly work their land (exemptions included all land owners who were too old, over 60, or too young, below 18, to work their land, widows, emigrants and war veterans), and eliminate big landed property through a process of a nationalisation-limitation for those who did not directly work and run their farm.

The results of these nationalisations were to depend on the accuracy of the declaration of landlords' residence, as well as on the quality of the data relating to the census of private land. In such a context, it remains largely open to question whether a land census conducted in the climate of a strong threat *vis-à-vis* landowners was in fact conducive to a reliable assessment of what was to be nationalised (in this respect the whole success of the AR was conditional upon the size and the importance of land nationalised). Attempts by landowners to avoid the nationalisation measures by concealing their actual place of residence, the legal mode of exploitation of their land and the size of their properties cannot be ignored (15). Beyond considerations pertaining to the particular circumstances under which the programme of AR was being carried out, it is important to highlight the immediate implications of the nationalisation measures proper.

Private property of land is not abolished as such. As stated by the Ordinance of AR (16) "the agricultural revolution does not abolish the private property of the means

of production, but it abolishes "the exploitation of man by man" (17). Large properties are seen as a non-viable form of farming (at least in the context of the PAS). All modes of sharecropping and farm tenancy are abolished. Wage labour is in principle abolished as land is now compulsorily exploited by the landowner and his family members (the private ownership of land is limited up to a point where the reliance on outside labour becomes in principle an exceptional possibility).

The rationale behind the limitations on large properties is that average farms will require their owners to make more intensive use of their assets. Land limitation was defined so that the size of the property would not exceed the "working capacity" of the owner and his family. The notion of a family working capacity proved however an elastic one, and its measurement varied with the degree of mechanisation. This notion, being more a general and a theoretical principle, in practice was the income factor which served to determine the extent of the land to be limited. The working capacity of an owner and his family (18), was therefore determined on the basis of a land which can generate a level of income three times that earned by a fully employed worker in the SMS (19). The size of a farm thus defined was further increased as the size of the farmer's family was taken into account. For a one-child family, the property was increased by one third, but for families of two and more children, the increase could not exceed 50% of the upper limit of the maximum size of limited properties (on average 43 ha). The nationalisation-limitations leave the landowners with a maximum size property not exceeding 15% of the ceiling allowed in a given zone (the land area of reference was never the minimum limit but always the upper limit). In order to prevent a new form of land concentration (which the Algerian reformers see as a cause of non-intensive farming), all forms of land transactions were prohibited, and limited properties were to remain within their fixed limits. Such strict legal measures clearly point in the direction of the concern of the reformers to promote, through coercive farm sizes, the objective necessity of intensive farming. Average farms were therefore seen as the embodiment of efficiency.

In view of the situation of widespread agricultural unemployment, there was however a contradiction in such a scheme. If by "punctual wage labour", a provision made to reconcile the restriction on the use of wage labour, one understands the necessity for limited farmers to necessarily resort to mechanisation, then the impact of the AR on employment certainly cannot come from limited farmers. The logic of this scheme can only be understood as an attempt to limit the emergence of an important class of landowners (and therefore of land concentration) on the one hand, and to encourage and promote the emergence of a class of capitalist farmers on the other (20).

If in principle land reform aimed at the suppression of absolute ground rent, all nationalised landowners were however promised compensation in the form of a 2.5% National bond payable within 15 years. This provision was a compromise: the payment of compensation is a form of ground rent paid to nationalised landowners, with a difference however. Instead of being paid by farmers and/or peasants, it is now paid by the entire society through the commitment of the state. Such a measure nonetheless remains limited in essence. The payment of such compensations is made in a *de facto* devaluated currency (developing countries being very often the context of an important rate of inflation), eroded even further by the period of 15 to 20 years necessary for their actual payment.

C. The assessment of nationalisations.

By March 1973, the assessment of the extent of private properties gave the following results.

Table III.3. 1: Land under private ownership (Number= 1,000).

	Number	%	Proportion of different categories of properties
Landowners(total)	1,322	100	100
In Northern Algeria	1,255	94%	
In Southern Algeria	77	6%	
Individual landowners	731	100	55%
In Northern Algeria	673	92%	
In Southern Algeria	58	8%	
Landowners into indivision*	601	100	45%
In Northern Algeria	582	97%	
In Southern Algeria	19	3%	

Source: Benhouria, Tahar "L'économie de l'Algérie". F. Maspéro. 1980. Paris, p. 195 and "Statistiques". ONS.Algiers. N° 1. * For 582,000 co-owners in Northern Algeria and 19,000 in Southern Algeria there corresponded respectively 172,000 and 6,000 properties.

Two points are apparent from these figures. The concentration of agricultural land is mainly located on the Northern part of Algeria which represents about 10% of the total area of the country. This geographical dis-equilibrium is mainly due to the fact that 90% of Algeria consists of the Sahara desert. The proportion of private ownership of land into joint possession concerns nearly half the landowners (for this category of landownership, there were on average well over three owners for one given property). Such a result makes it quite difficult to assess and categorise land accruing to absentee landlords and that accruing to limitable owners. The main characteristic of properties in joint possession is that they tend not be recorded at all. Their possession is mainly fixed by tradition and non-written rules. This is an important aspect of the complexity of landed property in Algeria. In the absence of a written assessment of landed property and in view of the danger of the land reform, landowners will tend therefore to exaggerate the extent of property in joint possession. The nationalisations of private owners were conducted on the basis of the results of the perusal of the census established by the local executive power (the APCE). The classification of landowners according to their situation *vis-à-vis* AR gave the following results.

Table III.3. 2: Distribution of the 4 main categories of landowners according to their respective status vis-à-vis the AR as established by the APCEs (%).

Category of farmers	% of each category of landowner
I. Landowners non concerned by nationalisations.	76%
II. Other categories of landowners:	
Absentee landlords	2.75%
Limitable landlords	0.61%
The exceptions.	20%

Source: Ibid.

In order to highlight these results, we first look at the method by which the CNRA derived the four different categories of landowners. A straightforward category of landowner was not concerned by the nationalisation measures. Within this category are classified, in principle, all landowners with properties not exceeding 5 ha of non-irrigated land, 1/2 ha of irrigated land or an oasis not exceeding 20 palm-trees (this latter category pertaining exclusively to Southern Algeria). The second category of landowner was in turn subdivided into two main categories: nationalisable landowners (either completely or partially), and those who benefited from the regime of exceptions. Those who neither fell under one category or the other was considered absentee landlords. Given this categorisation of landowners, let us look more closely at the lists established by the APCEs. One immediate point is that the proportion of landowners not at all affected by the nationalisation measures was extremely high: 96.5% (only 3.5% were in effect concerned with the procedure of nationalisation/limitation). With 20% (21), the proportion of exceptions was equally important. According to the report established by the CNRA (22), the total number of the four categories of landowner, as established by the APCEs, was 13% short of the actual number of landowners as established by the census. In the process of "aggregation", on the basis of the list established by all the APCEs, 13% of landowners were therefore left out. The undermining of the nationalisation measures was further highlighted by the findings of a poll conducted on a sample representing 50% of private landowners: the extension of the results of such a poll (so as to include all private

landowners), showed that the proportion of absentee landlords was 2.93% and that of the limitable landowners 2.22%. Whatever gap existed between the findings of the census and that of the poll (both of which can be considered to have fallen short of the real number of absentee and limitable landowners considering the wide range of political and economic means at their disposal), the convergence of interests between landlords and local authorities in charge of the implementation of AR, the room for manoeuvre allowed by the complexity of the land tenure system etc., justify to a large extent the poverty of the actual results of the June 1975 nationalisations.

Table III.3. 3: Results of land nationalisation.

	Number of nationalised landowners	Nationalised agricultural area (1,000 ha)
Absentee landowners	17,000	631,840 ha +
Limitable landowners	4,900	768,000 palm-trees
Total	121,900	631,840 ha + 768,000 palm-trees*

Source: Benhouria, Tahar Op., Cit. p. 200 (* Official statistics did not show any evidence of nationalised means of production other than land).

With 631,840 ha, such nationalisations represented a mere 11% of the total land of the PAS (1965 data).

D. The formation of the agricultural revolution sector (ARS).

The constitution of the ARS and its particular characteristics were determined by the mode of distribution of nationalised lands. Co-operation (23) was the dominant form under which the new sector was organised. The free distribution of nationalised land went to those peasants who were either insufficiently provided with land or who were landless. This distribution was also accompanied by the obligation on the beneficiaries to work land under whatever co-operative form was decided for them. As beneficiaries (the priority beneficiaries were the workers who were already employed on the nationalised farms), they were to accept the conditions attached to the attribution (24). If the form of co-operatives was decided by the reformers, in turn these co-operatives were in principle autonomous and independent from any outside power. In practice, one finds a parallel between the situation of the self-managed estates and that

of the co-operative sector. The setting up of the co-operative system was based on the central role of the Service Co-operative CAPCS (25) at the level of each commune. All beneficiaries of the AR (whatever the mode of land attribution), are *de facto* members of the CAPCS. In effect the CAPCS represents the backbone of the co-operative sector. It provides the new agricultural sector with all the services required (26): fertilisers, credit, farm machinery, marketing, etc. Thus, the CAPCS was set up to perform the same functions *vis-à-vis* the ARS in particular and the PAS in general, as those of the different specialised state boards *vis-à-vis* the SMS. In this form, and given such specialisation, the CAPCS is very similar in nature to the structure of ONRA: all conditions of production and distribution are within the hands of the CAPCS, itself "dependent for much of its marketing and technical assistance on state agencies" (27). The power of the CAPCS contains therefore the same potential danger of bureaucratisation and domination over the new agricultural co-operative sector. Moreover, the CAPCS itself is part of an economic environment dominated by the power of BNA, OFLA, etc. "During the National Conference for the Development of Agriculture in April 1976, representatives of the producers of the SMS, as well as those of the co-operative sector, formulated requirements and demands, criticised the same system and proposed the same recommendations: the same public institutions which previously suffocated the SMS (BNA, OFLA, SAP, ONAMA, etc.), were again on the carpet" (28). The nature of the difficulties encountered by the co-operative sector, is not so much associated therefore with the fact that the ARS was managed under a co-operative form, but rather the limited economic power of the CAPCSs themselves. One ought to add that, in themselves the CAPCSs may well be seen as an ideal form of dynamising the co-operative, as well as the private sector. The whole question hangs on the overriding influence of the economic system at large. As such an "island of co-operation" has little chance of surviving in an hostile economic environment for "it is extremely doubtful whether a transition to a collective system in agriculture is at all feasible so long as the other sectors of the economy remain areas of private enterprise.

The few experiments of this type seem to have run into considerable problems. The cases of Tanzania, Algeria and Mexico provide some relevant illustrations" (29).

a. The co-operative system.

The management of the ARS was based on the following system of co-operatives and groupings.

1. The CAPRA (the AR Co-operative of Production) is a form of co-operation whereby land and all means of production are collectively owned. It is a form of co-operative close to the model of the "self-managed" estate.

2. CAEC (the Common Exploitation of Agricultural Co-operatives) groups the beneficiaries who work their land in common. Here, land is privately owned, but the means of production are under collective ownership.

3. GMV (the Grouping of Land Development) is a form of grouping used whenever the quality of the land distributed is too poor to be exploited other than on an individual basis.

4. The GEP is a Grouping of Peasant Mutual Help.

5. The GAI (the Agricultural Grouping of Owners in Joint-possession) a grouping whose constitution is accompanied by the commitment of the co-owners not to split their holding for a period of at least 5 years. The logic behind such a condition, is that the practice of co-operation will eventually impose itself as a necessary and superior form of farming compared to the individual private farming of the private sector.

If this wide range of collective forms of agricultural organisation was devised to suit the particularity of each situation, their actual distribution showed however an emphasis on, and a preference, for the most developed forms of co-operation: the CAPRA.

Table III.3. 4: Distribution of the different forms of co-operatives in the ARS.

Category of co-operatives	Number of co-operatives and %							
	1973	%	1975	%	1977	%	1978	%
CAPRA	1,349	59%	3,633	70%	4,352	74%	4,800	80%
CAEC	707	31%	763	14%	581	10%	530	9%
GMV	258	11%	831	16%	926	16%	670	11%
Total	2,314	100	5,227	100	5,869	100	6,000	100
CAPCS	N.A		610		659		N.A	
Grand total	-		5,837		6,518		-	

Source: Statistiques N° 1. O.N.S.

With 80% of co-operatives, the CAPRAs are the dominant form of co-operation. The drop in the number of CAECs has been considerable (25% between 1973 and 1978). This drop could be explained on the grounds that, whenever the option was left to the beneficiaries, the choice of individual plots was opted for, or that there has been a transformation of CAECs into CAPRAs. On the whole, it seems that the imbalance in favour of the achieved form of CAPRA, is indicative of the attitude of the reformers. As such, they seem to have made the economy of "the transitional stages which would have implied (as far as the beneficiaries were concerned) the prior learning and apprenticeship experience leading to a collective management on the basis of an already established experience within the framework of individualised plots" (30). In terms of areas, the weight of CAPRAs was also overwhelming.

Table III.3. 5: Distribution of the different forms of co-operatives by area.

Category of co-operatives	Agricultural area of each form of co-operative (1,000 ha)		Average agricultural area /co-operative or grouping.(ha/unit)	Number of different co-operatives and grouping as given by the survey
		%		
CAPRA	736	82%	175	4,203
CAEC	57	6%	107	528
GMV	92	10%	99	930
GEP	11	1%	64	170
GAI	866	0.09%	86	10
Total	896	100	153	5,841

Source: Annuaire Statistique de l'Algérie. 1978.

The CAPRAs controlled 82% of the total area, and their average size was also the highest of all forms: 175 ha. If the form CAPRA was dominant by its number and its area, it was also dominant in terms of beneficiaries it employed as witnessed by the table below.

Table III.3. 6: Distribution of beneficiaries in the co-operative sector in 1975/76.

Category of beneficiaries	Number of each category of beneficiary	%	Number of average beneficiaries/co-operative	Ratio of the number of ha/beneficiary
Co-operative and pre-coop. beneficiaries	78,793			
-CAPRA	51,899	58.5%	12	14
-GMV	18,401	21.0%	20	5
-CAEC	5,654	6.0%	11	10
-Others	2,839	3.0%	16	4
Individual beneficiaries	9,814	11.0%	-	4
Total	88,607 *	100	-	-

Source: Ibid. (* On December 1978, the number of total beneficiaries was 95,000 but its structure was not available.)

CAPRA beneficiaries represented 66% of all co-operative and pre-co-operative beneficiaries and 58% of all beneficiaries of the AR. On average, 14 ha were available for each beneficiary in each CAPRA. The ratio of the average size of a CAPRA to the average number of beneficiaries, i.e. 12, tends to suggest that these co-operatives have been devised to experience a certain form of mechanisation which in the case of Algeria cannot be divorced from a built-in tendency to rely on the use of temporary workers. The necessity to rely on outside labour stems from the difficulty in maintaining a constant given level of farm machinery: the procedure of acquisition of inputs being of a bureaucratic nature, the CAPRA can neither be certain of the time of their acquisition, nor of their nature (particularly for farm machinery). The control over a given technological model is not therefore achievable in such a context. In other words, the issue of the choice of a technique and its mastery by the direct producers, remain unsettled. The problem of defection of the beneficiaries has also to be taken into account. As a consequence, most CAPRAs have tended to operate on the basis of a regular

use of seasonal workers, transforming themselves into assimilated capitalist units.

The preference for the CAPRA (31) form of agricultural organisation, is further evidenced if one looks at the ratio of the agricultural area per beneficiary for other forms of land exploitation. This ratio tends to average 4 ha without any compensation in terms of increased land quality. The form of all pre-co-operative land corresponds precisely to a type of land requiring improvements and development. The quality of the land under the co-operative form was also comparatively of a higher fertility. On the whole however, the concrete conditions under which nationalised land has been acquired - nationalised landowners were given to select themselves that part of the land (usually the least fertile and/or the most difficult to farm) which was to fall under nationalisation (see below) tends to suggest that the fertility of the land of the private sector remains superior to that of the co-operative sector. But given the technical means at the disposal of the new sector, the nationalised land is very likely to produce higher yields than when it was part of the private sector. This is in fact one of the main potential achievements of the AR. On the whole, the analysis of the co-operative system suggests that the real impact of the AR revolves around the sole impact of the CAPRA form.

b. The balance sheet of the agricultural revolution sector.

The latest figures, i.e. 1978, allow us to assess the form of the ARS so far.

Table III.3. 7: Structure of the agricultural revolution sector in 1978.

Area **	Number of palm trees	Number of beneficiaries	Number of co-operatives				
			CAPCS	CAPRA	CAEC	GMV	GEP
1,100,000	1,820,000	100,000	674 *	4,800	530	670	170

Source: Ibid.

*Figure relating to 1974; (** This area relates to land suitable for cultivation and not the total area of the co-operative sector).

For a total agricultural area of 7,542,485 ha, the co-operative sector share was 14.5%, representing the equivalent of an average of 1 out of 7 ha (the quality of the land aside). The setting up of this new sector was accompanied with its endowment in

terms of an important equipment stock. In 1978, about 30% on average, of all farm machinery was catering for its needs (32).

In terms of performance, and with the limitations that go with the short period of the experience, the relative highest farm equipment of the co-operative sector did not result in a substantial production increase as evidenced by the table below.

Table III.3. 8: Selected production performance of the CS (1974/75=100) (33).

	1973	1975	1977	1979	1980
Cereals	22	100	54	64	97
Share in total production	4 %	14 %	15 %	12 %	12 %
Pulses	24	100	117	85	88
Share in total production	4 %	10 %	14 %	12 %	13 %
Industrial crops	11	100	72	145	97
Share in total production	2 %	12 %	10 %	16 %	13 %
Citrus fruits	NA	100	94	93	92
Share in total production	-	5 %	4.5 %	5 %	5 %
Market-garden products	26	100	99	104	134
Share in total production	3 %	7 %	9 %	8 %	9 %

Source: Ibid. and Annuaire Statistique 1984.

During the last year of reference (1975-1980), the share of the production of the CS seems to have stabilised around 13% of the total production for cereals 13% of the total production for pulses 14% of the total production for industrial crops, 5% of the total production for citrus fruits and 9% of the total production for market-garden products. In terms of crop distribution, cereals dominated the sector with 70% of cultivated land. Translated in yields, these production performances tend to show the lowest figures of all the agricultural sector: 6 quintals of cereals/ha in 1980 against 9 for the SMS and 7 for the PAS; 4 quintals of pulses/ha against 3 in the SMS and 6 in the PAS; 59 quintals of market-garden products/ha against 62 in the SMS and 66 in the PAS; and 79 quintals of citrus fruits/ha against 101 in the SMS and 89 in the PAS (34).

In what follows, an attempt will be made to assess the extent to which the objectives of the AR programme have been achieved. Through an assessment of the results produced by the implementation of the AR, our focus will be particularly centred upon the causes of low performances, as well as on the nature of changes brought about by the AR.

E. The impact of the agricultural revolution and its limits.

The most straightforward way of assessing the impact of AR is through its achievements in terms of land distribution, employment creation and production (in themselves these three objectives have an interrelated effect on each other, their separate treatment does not imply that one does not bear in mind the nature of their dialectical relation. If land distribution affects the level of employment through its beneficiaries, in turn the mode of organisation of production reacts on the level of employment via the capitalistic nature of the process of production, etc. A more thorough way of assessing this AR remains however with the perspective of the dynamic of changes it can generate *vis-à-vis* the agricultural sector as a whole and the economy in particular).

a. The immediate achievement of the agricultural revolution and its limits.

The most paradoxical effect of the programme of AR is that its benefits have not been accepted. On the one hand nationalised land has not been fully distributed, and on the other there have been considerable withdrawals on the part of the beneficiaries. The land not distributed did not result from the defection of beneficiaries, but rather from a lack of willing candidates in the first place: about 150,000 ha and 45,901 palm-trees (35) have not been distributed. The latest figures, in 1981 (36), showed that the number of beneficiaries fell from 100,000 to 80,000 (37). This situation whereby the beneficiaries of a land reform give up the benefits of the reform itself is certainly unique in the history of land reforms. Many factors are to be accounted for in such a situation. The phenomenon of rejection of the AR by the peasants stems from the

general conditions attached to the whole programme of land reform. As such, the programme was not the expression of those concerned. A non-peasant motivated agrarian reform cannot therefore produce a solution which will be in accordance with the interests of the landless and near-landless. In the context of Algeria, the ruling class has produced a solution of compromise: it embarked on a radical project of land reform but without its main actors. Thus, the extent of land nationalisations proved smaller than expected, and at least a minimum of 13% of landowners escaped such measures. What the withdrawals further proved was that access to land as such, was not a sufficient condition, especially when this land was of a marginal quality. The financial allowances given to the beneficiaries as a form of help for the time necessary before any income is derived from the exploitation of the land, were also too low to prevent land renunciation. This situation evidences well the fact that the general conditions under the terms of which land was acquired (the mode of acquisition of the nationalised lands), were not in themselves a sufficient condition. As A. Benachenhou put it "there is no longer a non monetary vision of labour or of landed property ... the idea to strengthen the link between the peasant and the land must not be conceived through the distorting view of private property, but by a careful examination of the real relation that links the peasant to the land, and which relates to the search for food security and/or to a level of income to be achieved" (38). Clearly, if a process of land distribution following a programme of land reform does not take into account the economic significance of this land in terms of the food security, or the sufficient income it can achieve for its beneficiaries, it only puts into question the very nature of the land reform itself.

As far as employment is concerned, the impact of the AR proved marginal. If one excludes the number of withdrawals, i.e. if one thinks in terms beyond the contingency of the withdrawals, the AR secured land for 100,000 beneficiaries out of a pool of a poor rural population estimated at 1.2 Million. The category of beneficiaries was also socially differentiated (39). The two main categories were landless peasants and

agricultural workers composed of sharecroppers, *khammass*, seasonal and permanent workers (some of the latter coming from the SMS), on the one hand, and small and average peasant - most of whom being beneficiaries on individual plots or in CAECs - on the other (40). As priority was given first to those already working on the nationalised lands and then to small peasants, it appears that the impact of land distribution on landless peasants has been insignificant. In effect, there has not been "an integration of new workers in production, but rather a stabilisation of employment granted to workers who were already employed" (41). *Vis-à-vis* that fraction of the peasantry which was displaced from the nationalised public land, AR has in fact worsened the fate of the rural poor. The overall impact of the AR is not therefore expected to affect the generating mechanisms of rural and agricultural migration. The problem of agricultural unemployment remains from that viewpoint unresolved.

b. The implication of the AR for co-operatives and average properties.

The emphasis on the constitution of a modern, and technologically well-endowed, sector, has been motivated by the objective of achieving the growth of agricultural output realised through the standardisation of private property into average properties on the one hand, and the constitution of co-operatives which will end up as a model of production efficiency on the other. On this point it is open to question whether the reduction in the size of private holdings will automatically lead to an intensification in farming methods. For this to take place, two conditions are to be met: industrial inputs ought to be in abundant supply (which is not the case), and labour for employment off the farm unit, ought to be scarce so that private farmers resort to more intensive farming as the only technically possible alternative (the obligation for farmers and their families to exploit directly and personally their holding without relying on outside labour is only possible if the ratio of capital to labour can be increased without constraint). In the absence of these two possibilities, average farmers will not engage in intensive farming, and production cannot substantially be

increased.

The constitution of co-operatives as a form of organisation of the new agricultural sector was also motivated by two main considerations: to avoid a parcellising of the land and to develop farming units which will prove superior to private holdings.

The technological 'superiority' argument of the CS. If the co-operative form of production allows for investment on a scale which otherwise would not have been possible by individual farmers, the mode of constitution of such co-operatives backfired on their presupposed potential advantages. The constitution of co-operatives and their form being imposed onto the beneficiaries, these new forms of agricultural organisation were in advance of the experience of their beneficiaries whose working background contained no apprenticeship of co-operation: the gap between the superior form of production (as represented by the co-operative) and the political consciousness of the beneficiaries was too wide. The emphasis on a technologically well endowed co-operative epitomises further the uncertainty of their mission in so far as the substantial increase of agricultural production is concerned. Indeed the acquisition of a given technology raises two important questions: what type of technology to choose? and who makes the choice? In view of the co-operative experience, the determination of the technological dimension involved no participation on the part of the beneficiaries and potential users. As a result, the entire organisation of the process of production took place from outside the co-operative structure. As N. Jazrja argues in her study on the impact of technology on the CAPRA, "the choice of techniques of production and of degrees of mechanisation, are fundamental elements which determine the level of control over the process of production. The fact is that the programme of crops brought very important modifications in relation to the cultural techniques previously used, and certain important elements (use of certain products, handling of certain farm machinery) were not under the control of co-operative members" (42). As far as this point goes, the ability of the co-operative sector to achieve high yields,

depends therefore, in the last analysis, on the ability of the co-operative members to integrate under their control the technological dimension of the organisation of production. The homogeneity, in terms of social background, among co-operative members was also absent. In particular, there was an hostility between those who still owned their own plot (small peasants), and those who did not (the landless). co-operative members were *de facto* wage workers with a status similar to that of the SMS. The overall economic environment of the co-operative sector was dominated by the bodies which dominate the SMS: the M.A.R.A, the banking system, the SAP, ONAMA, etc.

The parcellising argument. As far as this argument is concerned, the formation of co-operatives was presented as a way of fighting the parcellisation of land which was prevalent in the PAS. This argument was however contradicted by the conditions under which the nationalised land was acquired in the first place. If the formation of co-operatives has indeed resulted in the constitution of large units of 175 ha on average per CAPRA (43), these large units in turn are no evidence of homogeneous units of one lot. As a matter of fact, the formation of co-operatives has been conducted on the same principle as that which prevailed in the constitution of the National Fund of AR: the nationalised land was integrated as such in the new co-operatives. The relatively large size of co-operatives hardly raises the question of their structure. The conditions under which the nationalised lands have been conducted is clear evidence of the degree of parcellisation of the land of the CS. Indeed the nationalisation of limitable landowners was conducted according to their own terms: they had the freedom of choice as to the portion of their land which they designated for nationalisation, and in so doing, such a procedure gave them the opportunity to get rid of the least fertile fraction of their land. In other words, no physical regrouping, under whatever form, took place and the problem of parcellisation was not attacked. S. Bedrani a leading figure on Algerian agriculture writes: "In the course of a survey in EL-ATTAF during May, 1977, we came across one CAPRA which had no less than 160 plots scattered all

over the commune. Half a day has not been sufficient enough to visit them all by car" (44).

From whatever argument: the resorption of rural unemployment, the potential it offers for intensification, its immediate beneficiaries, or its demonstrating effects upon the rest of the private agricultural sector, the impact of the programme of AR seems to remain somewhat short of expectations. Such a question raises the whole problem of the content and the nature of the agrarian transformations.

F. Agricultural revolution *versus* agricultural reform.

The Algerian reformers used the notion of agricultural revolution to describe the nature of agrarian transformations. The difference between an agricultural revolution and an agricultural reform, is not simply a case of semantics, it rather involves the analysis of the nature of the changes that took place and its extent. For an agricultural revolution to take place, two conditions need to be met: a practical or empirical condition, and a theoretical condition. The practical condition refers to what has actually been achieved by the reform. Thus an agricultural reform can be termed an agricultural revolution if the transformations it enabled are being achieved on an unprecedented scale. In particular such achievements must include at least one or both of the following objectives: the eradication of rural poverty and rural unemployment, and/or the increase of agricultural production on an unprecedented scope. In the Algerian case, neither rural unemployment, nor agricultural production have drastically been affected.

On theoretical grounds, the distinction requires a different perception. Through their populist rhetoric, the Algerian reformers claimed to abolish "the exploitation of man by man" (45) by means of abolishing the indirect management of land, i.e. through the abolition of large property, on the one hand, and by developing and generalising the system of co-operatives on the other. If by the suppression of indirect exploitation of land one understands the suppression of absolute ground rent, it does not follow that

the suppression of ground rent achieves the suppression of the capitalist relations of production. In fact, and the history of most capitalist countries shows this, a capitalist system of production accommodates itself better without the existence of ground rent particularly as a result of the "dissociation historically operated between land owners ... and capitalist farmers" (46). In fact the very existence of ground rent, particularly in its absolute form, is nothing but the very expression of such a dissociation. From that viewpoint the suppression of absolute ground rent allows only for the more rapid penetration of capital into the agricultural sphere of production, and achieves the transformation (or the replacement) of landowners into capitalist farmers. As M. Gutelman points out, "an agrarian reform which would go as far as to a complete nationalisation of the land would nonetheless remains a bourgeois reform" (47). The abolition of large landed property does not challenge or question the private ownership of land as such but only sets a physical limit to the private property of land. In other words the programme of land reform does not set any economic limit to property. The Algerian reformers are confused between the notion of a farm unit and that of property; in particular they tend to identify an average property with an average exploitation (48). In fact it was expected that this natural constraint would act as a catalyst and help transform this class of private landowners into a class of dynamic capitalist farmers.

The assimilation of AR with the development of the co-operative system is another mystification of the Algerian land reformers. The equation of these two terms tends to suggest that co-operatives are by nature socialist units. co-operatives are not economic units proper to the "socialist mode of production". As a matter of fact, a co-operative system is far from being incompatible with a capitalist system, and for that matter, it does not make much difference that the appropriator of economic surplus is a capitalist, a group of capitalists or simply the State and its main institutional bodies. If the setting up of a co-operative leads to a new form of production organisation, it

leads as well to the emergence of a new form of ownership (which, in the Algerian context is predominantly State ownership). If the co-operative members appear as the owners of the co-operative - as is the case of the cooperators of the AR - this ownership is purely formal since it is not accompanied by a control at the level of the relations of production. The rights of the beneficiaries can only be used in so far as their membership *vis-à-vis* the co-operative is concerned. Once the status of membership was granted, the experience showed that most CAPRAs became integrated in the same economic environment as that of state agriculture, and as such, experienced similar consequences and underwent a development which displayed characteristics which were far removed from the idealised projections of the reformers (in the mind of the latter, the constitution of co-operatives would lead to radical changes in the organisation of agriculture, and their performance would prove so effective that they would become an irresistible model for attracting the private sector, as well as for the SMS). Thus the insufficient fertility of the land, low yields, the level of financial help etc., all accounted for the defection of the youngest and the skilled co-operative members. As a by-product of this situation those who remained (on average the oldest) opposed new members, and tended to develop the attitude of landowners *vis-à-vis* temporary workers. The use of seasonal workers tended to establish itself as a systematic procedure, up to a point whereby, for most co-operatives, the majority of manpower costs went to seasonal workers (49). This tendency to use a high proportion of seasonal workers became the condition under which the co-operative sector tends to operate and therefore reproduces itself. One is therefore far from the ideal model of co-operation depicted by the reformers and "the CAPRAs function beside the peasantry without generating more demonstrative effects than the SMS did before" (50). Under these terms if the CAPRAs could not so far serve as an example of success *vis-à-vis* the peasantry, it is simply because they could not accomplish their own in the first place.

From such a perspective, the programme of AR has simply consisted in an extension of

the model of farming proper to state agriculture combining large estates, i.e. necessarily requiring extended mechanisation, and *de facto* run by government agencies, whether for the provision of inputs, the mode of farming, the type of crops or the technological option. Thus perceived, the immediate outcome of the Algerian AR consists in the fact that the State has now achieved an extension of the agricultural sector under its aegis by an extra one million ha, while leaving relatively unaffected both the extent of rural poverty and the land assets of most of the middle peasants and that of large landowners.

CONCLUSION.

The massive state intervention which gave the newly farmed sector about 30% of available farm machinery was not able to substantially raise labour productivity. Up to the 1980s the CS proved unfit to meet the requirements of the reformers in so far as production was concerned (51). Two characteristics accounted for such immediate results: the CS inherited a land which on whole was not among the most fertile land and whose scattered lay out must probably have stood in the way of a rationale use of farm machinery, *de facto* also the CS could not possibly emerge as a leading sector given its limited size in relation to the agricultural sector as a whole (14%). These qualitative and quantitative limitations in turn could not possibly have produced a significant impact on rural poverty alleviation.

Even if it is too early to assess the impact of the agricultural transformations, and beyond the gap existing between the objectives (52) and the realisation, the question of the Algerian land reform raises the problem as to whether it is possible to conceive any programme of agrarian transformation (with its expected effects on production performance and rural poverty) without focusing on the peasantry (especially the poor peasantry) as the main immediate beneficiary and the direct architects of such transformation. In the light of the circumstances surrounding the adoption and the implementation of the AR, the *de facto* exclusion of the majority of the potential beneficiaries of the reform from its benefits [a more equal distribution of land to make room for about 1 million poor rural families, 500,000 landless and 425,000 near landless living at sub-minimum subsistence level (53)], defines the nature of an Agricultural Revolution which is "revolutionary in name only" (54). Out of a target population of over 1 million the number of beneficiaries represented less than 100,000 families altogether. In the context of such a reform "most small peasants believed they were being controlled rather than in control of a revolution ostensibly being waged on their behalf" (55). At an overall level the programme of AR neither

prevented the long process of peasant pauperisation, nor promoted their condition of farmer/owner and/or their status of a permanent rural proletariat. As a result of the process of social differentiation the economic marginalisation of the peasantry has resulted in its steady divorce from an exclusively agricultural activity. Under the impact of capitalist relations of production, the sale of their produce is thus increasingly replaced and taken over by the sale of the labour power (56).

In itself the by-passing of the peasantry revealed the real motivation of a programme of AR essentially attached to the exclusive objective of increasing agricultural production - "stagnation has been a keynote of Algeria's agricultural production" (57) - to meet the increasing urban demand for wage foods which so far had to be met with an increased diversion from oil export proceeds. The emergence of a rapidly growing and competing industrial sector imposed new terms of relations with agriculture, particularly through relatively higher levels of urban wages and the absorption of the majority of investible resources. The emphasis enjoyed by industrialisation, whether in its social configuration through the dominant classes and groups which identify their interests with it, or in its economic aspect in terms of the share of oil surplus it enjoys, is such that Algeria "cannot import more and more food without damaging its industrial apparatus, or abandoning some part of its plans for importation of machinery" (58).

As part of the whole agricultural sector the weight of the CS remains negligible and the changes brought about by the "reform" did not go beyond the exclusive technical organisation of the co-operative sector itself. In particular the AR did not bring any serious challenge to the pre-eminence of private capital invested in the sphere of circulation of agricultural production (according to certain estimates (59) merchant capital controlled over 2/3 of the domestic market for agricultural and food products). The pre-eminence of merchant capital in the distribution of agricultural production bears an important relation to the control over the agricultural surplus and its

utilisation: The size and extent of merchant capital are such that they indirectly determine the overall conditions of valorisation of a great portion of agricultural production and consequently its expansion (merchant capital so far remains on the outskirts of production and does not attempt to alter the organisation of its labour process). In the past its reaction to the threat of an extension of the state marketing network proved efficient enough to hold back any product from the market for several months, pushing prices up to unprecedented levels (60) and creating shortages whose effects in sensitive, large and overcrowded cities guaranteed undreamable profits, and threatened social peace. The control over the agricultural domestic market, which may accompany a desirable price policy, goes well beyond the scope of the agricultural sector alone. One permanent characteristic of this market being the upward price instability, there is therefore a constant disruptive tendency which particularly affects the process of capital accumulation as the pressure for urban wage increases constantly build up (61). The overall limit of the present land reform programme calls for an alternative and general agricultural policy capable of embracing the three sectors altogether, as a unique structure. Moreover, such a new policy cannot be conceived outside a redefinition of the terms which so far have prevailed between agriculture and industry.

In the following conclusion, the implications of the study of the overall agrarian issue are taken up in the form of a brief assessment while Part IV discusses the terms under which the distribution of food consumption of the different groups is interwoven and reconciled with the requirements of industrialisation and capital valorisation.

NOTES

1-In the mind of the Algerian reformers the programme of land reform was worded as an "agricultural revolution" (AR) programme. As reforms are whatever reformers have in mind, at this stage, the appropriateness of such a formula does not inter into our consideration. At a latter stage we will comment on the meaning to attribute to an agricultural revolution.

2-This period of truce has objectively cushioned the socio-economic effects of the land reform on the landlords. Moreover this period was long enough to allow big landlords their reconversion from agricultural to non-agricultural activities and therefore transform their agricultural capital into commercial and industrial capital. Viewed in these terms landlords did not undergo a considerable loss of economic power as such. The new situation reflected therefore more the development of a different form of a class alliance.

3-Khennas, S. Pétrochimie et agriculture: le cas de l'Algérie. Thèse 3^{ème} Cycle. Grenoble. 1976. p. 173.

4-The determination of the size of such units will depend on variable factors according to the quality of the land, the capacity of work of the owner and his family as well as the level of income it can generate. This point will be taken up at a later stage.

5-Sutton, Keith. Agrarian Reform in Algeria- Progres in the face of disappointment, Dilution and Diversion. Rural Poverty and Agrarian Reform. New Delhi. Allied Publishers Private Ltd. 1982. p. 361.

6-Ibid.

7-The extent of such a land is not known to us but from the information gathered, it does not seem to be very important. Besides the problem of assessment of such particular nationalisations, there remains the fact that it was the marginal land which was chosen to be part of the land fund of the AR sector. On this point we will come back later.

8-Benachenhou, A. Op., Cit. P. 95.

For an account of the discrepancies in the balance sheet of land nationalisations existing between the different sources, see Sutton, Keith. *Agricultural Co-operatives in Algeria*. Year Book of Agricultural Co-operation 1981. Plunkett Foundation. Oxford. U.K

9-The side effects of nationalisations of such public lands meant that the communes and the Wilayate lost the ground rent which they formerly perceived from the private landowners. The state intervention however compensated for such a loss of income out of the public budget.

10-Such highly publicised donations which were over exploited up to demagogy were advocated as evidence of national solidarity and national unity. In effect such a political campaign particularly revealed that some of the donators were important government dignitaries. In this respect this operation showed that prominent political figures of the Algerian ruling class were in fact important landlords themselves. In the words of R. Tlemcani "many FLN-ALN [army and party] cadres rewarded themselves with land during the armed revolution and the moment of independence. As a case in point, Kaïd Ahmed, head of the FLN (1967-77) and member of the Revolutionary Council, owns more than 3,000 ha in Tiaret, which he had not, according to some people, owned prior to independence. His removal from the FLN was associated, according to people close to the pinnacle of power, with his refusal to give part of his property, as did other ruling ruling elements did, to the FNRA, the National Fund of the Agrarian Revolution, and his opposition to the agrarian revolution in general". Op. Cit. p. 135. Footnote N°28.

11-A.P.C and A.P.W became extended executive power organs so as to include "representatives" of the peasants: the U.P.A (the national union of the peasants).

12-All members of the local executive power are elected members. The regional governor (the Wali), is nominated and as such, he represents the government and his authority is that of the state itself. His political power is such that, he can dismiss any, or all of the elected members of the APC, or the APCE. In the last analysis, his

power always prevails. In the case of elected members of the APC, their power ought to be weighted against the background of the system of representation. Algeria being a one party state, any candidate must be godfathered by the sole party (the FLN), if he or she is to stand for any election. This procedure guaranties that the elected candidates will have to follow the political programme of the party first. As all elected candidates are mediated through the party, the selection of political representatives of the executive always falls within the official line of the party and the government.

13-Sutton, Keith. Op. Cit. p. 370.

14-M. Almeyra, Guillermo How Real was Algeria's Agrarian Revolution? CERES. FAO. March-April. 1979. Footnote N° 1. P. 35.

15-It is also worth noting that such concealments are possible with the implicit collaboration of the local authorities as they are the ones which know best the local situation, at both personal and impersonal level

16-The programme of AR was embodied into two major legal texts, The Charter of the AR and the Ordinance of AR promoted during November 1971.

17-*Révolution Agraire*. Presidence du Conseil. R.A.D.P. 1971. P. 23.

18-Whenever the farmer directly and personally exploits his farm with the help of his family, he can employ "punctual wage labourers". As no practical provisions were made to define the notion of a punctual use of wage labourers, this possibility in fact gives *de facto* an absolute freedom to farmers to employ whatever level of wage labourers they feel is necessary.

On the whole there remains the puzzle in which the Algerian reformers put themselves in: how to reconcile the abolition of the system of wage earning when, at the same time, we maintain the system by the very nature of which, this class is precisely reproduced, a system based on the private ownership of the means of production. It is therefore a theoretical as well as a historical misconception to want to abolish the use of wage labour, without at the same time abolishing the class of capitalists and the class of wage earners.

19-Such provisions maintain the original economic inequality that existed before the introduction of the AR. Moreover, if the income of a permanent in the SMS was taken as a reference or yardstick, this reference however excluded the size of his family. The social differentiation of the peasantry was therefore reproduced in all its manifestations.

20-In any case, the promotion of intensive farming always come up against the notion of the punctual use of wage labour. This clearly draws one's attention to the technological model that the reformers want to promote: the mechanisation of agriculture.

21-One cannot exclude the possibility that potential nationalisable landowners classified themselves in the category of exceptions. It is also worth noting that the comparison between the "exceptions" and the "nationalisable" suggest that in view of the proportion of the former, the "nationalisable" were in fact the exception and the "exceptions" the general rule. This is particularly interesting in view of the fact that the whole programme of AR was after all focused on the category of "nationalisable".

22-MARA/CNRA Balance sheet 1974. Quoted by Benhouria, Tahar Op. Cit. p. 196.

23-It is worth noting that "agricultural self-management" has not been considered as a possible way of organising and managing this new sector. The relative failure of the experience, particularly, from the viewpoint of agricultural production, has been somehow accepted in a somewhat implicit and indirect manner.

24-Individual attributions occurred only whenever the co-operative form was "materially impossible". Beyond the technical argument (which in fact is not clear), that justified the preference for the co-operative form, one finds a constancy of the Algerian AR: as potential beneficiaries, poor peasants were not part of the mode and conditions of utilisation of the land. At all levels decisions were made for them.

25-See chapter I.

26-The creation of CAPCSs allows to highlight in its own way and *a contrario*, the extent of the deficit of the "traditional" sector in terms of modern inputs.

27-Sutton, K. Agricultural Co-operation in Algeria. Op. Cit. p. 181.

28-Benhouria, Tahar. Op., Cit., P. 207.

29-Ghose, A. K. Agrarian reforms in contemporary developing countries. Croom Helm St Martin's. 1983. pp. 19-20.

30-Bessaoud, Omar. Revue Du Tiers Monde Volume XXI N° 83. July-September 1980. P. 618.

31-The CAEC form is close to the CAPRA system with a ratio of 10 ha/beneficiary.

32-See Appendix III.3.

33-The first years of implementation of the AR have not been purposely choosed as reference in order to avoid large and misleading output increases, i.e. until production organisation is "routinely" established away from major disrupting external influences.

34-See Appendix AIII.4.

35-Bouzidi, Abdelmadjid Revue Algérienne des Sciences Juridiques Economiques & Politiques. N° 3 September. 1980. PP. 417-418.

36-Statistiques. Office des Statistiques. Algiers, N° 2, 1984. P. 55.

37-See Appendix AIII.5.

38-Ibid., P. 174.

39-See on this point the article by O. Bessaoud and particularly pp. 616-617.

40-Benachenhou, A. L'exode rural en Algérie. Ibid., P. 97.

The exact distribution of the beneficiaries according to their social background is not available to us so far.

41-Ibid.

42-Jasra, N. Les debuts des CAPRA: difficultes et espoires. Terres et Progres, N° 5, Mars 1974. Quoted by Raffinot, M and Jacquemot, P. Ibid., P. 344.

43-The structure of CAPRA was as follow: 20% of CAPRAs have an area between 100 and 200 ha, 46% between 200 and 500 ha and 20% between 500 and 100 ha.

44-Bedrani, Slimane. Op. Cit. p. 78.

45- actual fact there is no such a thing as an "exploitation of man by man".

Exploitation, as understood in the sense of political economy, i.e. when devoid from any moral and subjective interpretation, the private appropriation of the surplus labour of the direct producers by the private owners of the means of production. As such, surplus appropriation is always mediated by the social relations of production which transform part of society into the representatives of capital and the other part as those of the labouring class. Moreover, such a surplus does not appropriation involve individuals as such, but always individuals as part of a given class.

46-Gutelman, Michel . Réforme et Mystification Agraires. Maspero. Paris. 1971. p.17.

47-Ibid.

48- An average property can well be transformed into an economically large farm unit provided the investment it carries out is important, regular and intensive in nature.

49-See Appendix AIII.6.

50-Chaulet, Claudine Paysans et collectifs de producteurs dans la R.A Algérienne. Cahiers du CREA N° 1 Juillet-Septembre 1976. P. 132. Quoted by Benhouria, Tahar. P. 204.

51-Between 1972 and 1980, the average yield for cereals was 5 quintals/ha.

52-For methodological purposes we left out of the scope of our study part of the objective of the programme of the AR, i.e. mainly Phase three and Phase four as well as the significance of a package of social measures. Phase three objective was concerned with the protection of the balance between the ecological environment and the development of livestock breeding. In particular it wanted to provide for the protection against overgrazing by setting up animal breeding co-operatives, helping the settlement of nomads, initiating a more balanced distribution of flocks via the nationalisation of large stock breeders, a greater protection of shepherds, etc. Progress concerning this phase is very slow particularly in view of the problems still associated with the organisation of the first two phases. Phase four which is still in preparation, is essentially focused on problems linked to the use, development and

control of agricultural water utilisation. Among the series of social measures taxes were eliminated for farmer and education was being extended in the countryside. The most ambitious programme of all was the plan to build 1,000 "socialist villages" by...1980. This project was meant to provide the agricultural population in general and the beneficiaries of the AR in particular with dwellings meeting the standard of a modern life: running water, electricity, schools, medical centres, etc. The long term objective of the project remains that of fixing the agricultural population on the one hand and by the same token discouraging rural migration. At the end of 1978, only 201 villages were build

53-Charte de la Révolution Agraire. Presidence du Conseil. Algiers. 1971. pp. 11-12.

54-Agricultural Co-operatives in Algeria. Op. Cit. p. 186.

55-Knauss, Peter. Algeria's Agrarian Revolution":Peasant Control or Control of Peasants? African Studies Review. 31/CD.

56-As evidenced from the following table, and a far as the population of poor farmers is concerned, agriculture contributed less and less to the formation of their income.

Table III.3. 9: Origin of incomes of independent farmers as a % of total income.

Origin of incomes	1960	1968	1973
Agricultural	87%	69%	40%
Non-agricultural	13%	31%	60%
Total	100	100	100

Source: A. Amara. Revue Algérienne des Sciences Juridiques, Economiques et Politiques. Volume XVII. N° 4, December 1980. p. 71.

57-Sutton, Keith. Agricultural Co-operatives in Algeria. Op. Cit. p. 185.

58-M. Almeyra, Guillermo. Op. Cit. p. 35

59-Benhouria, Tahar. Ibid, p. 211.

60-Price instability is a characteristic of the Algerian domestic agricultural market.Variation of prices for fruits and vegetables can range from 50% to well over 500% and 800% within periods as short as two months.

61-When the hardship of life develops through the inability to increase the standard of living via a wage increase, industrial workers tend to resort to an indirect form of resistance: working less intensively and/or even resorting to sabotaging their instruments of work. As far as agricultural workers are concerned, their form of resistance is expressed in a loss of incentive for their work accompanied by an increased tendency for self-consumption.

CONCLUSION Part III

The nature of agrarian change which so far dominated the agricultural sphere of production has not fundamentally altered the unequal access to land at the level of both the private sector (the transformations which took place within this sector have not substantially affected the structure of land ownership), and the "public" sector (the "SMS" still comparatively enjoys the same advantages as those which were its beneficiaries before independence). The first post-independent agrarian measures focused mainly on the progressive total state take-over of the colonial sector. As such this policy enabled the achievement of two objectives: the preservation of the colonial sector in its essential economic features (size, technical labour process, supporting structures, mechanisation, type of crops, etc.), and the integration of the colonial farms under the ownership of the state. In short, the substitution of one form of property (the individual ownership of the colonists), for another (that of the state) was not accompanied by a major alteration in the basic capitalist relations of production opposing the means of production (the estates and the technical equipment), their owner (the state) and those wage workers who were employed (existing now however, under a new ideological reference: managing committees, general assembly, workers councils, etc.).

The potential of a peasant land reform following the freeing of the colonial sector from its masters was therefore lost to the hegemonic construction of the post-colonial state. The contribution of the "self-managed sector" (SMS) therefore left unaltered the panorama of overall agriculture. By the 1970s, the dualistic nature of such an agriculture was in fact further exacerbated. The constitution of a new sub-agricultural sector of AR, constructed on the model of "self-management", with a high ratio of ha/worker combining an intensive use of industrial inputs and relying on state supporting structures, extended *de facto* the domain of state agriculture at the expense of the traditional/private sector, an extension which corresponds in spirit with the

development of the colonial sector itself. The marginalisation of the fraction of nationalised small peasants from the communal land, combined with the already landless and near-landless excluded *de facto* from the AR, has meant that the 1970s programme of land reform was in nature and in essence an anti-peasantry programme, i.e. a programme more based on the extension of state agriculture than on the actual 'de-colonisation' of the ex-colonial sector based on an openly farmer option of agricultural development.

Originating from a long and continuous process of confiscation of peasant land, the constitution and reproduction of the "modern" sector of "self-management" is, from a historical point of view, a reminder of both that confiscation and of its constancy. Just as in the not too distant colonial past, the "traditional" agricultural sector, with the predominance of the small and middle peasantry, remains far outside the realm of progress and development and as such, remains unaffected by AR. In this respect, and in so far as the small peasantry is concerned, the great obstacle to agricultural expansion and land access remains not only the large property available in the private sector, but also and particularly the state property itself. Dominant, this form of property has also excluded itself from one of the main objective of land reform, i.e. the limitation of large property. As during colonisation, the same agrarian contradiction was reproduced in the form of a consolidation of the dominant sector at the expense of the traditional sector. But as pointed out earlier, the contradiction does not stem from the existence of the private sector as such but from the conditions of existence and the conditions of reproduction of the ex-colonial sector itself. The priority given to raising agricultural production, on the basis of an extension of the already existing capitalist organisation of state agriculture, over the issue of the peasants' access to land (an option which in itself represents another conception of capitalist development of agriculture), is what characterises the dominant features of the state agricultural policy. In other words, agrarian transformations were mainly perceived through the immediate goal of market extension obtained on the basis of the reliance upon the upper

and middle peasantry of the private sector, as well as on an extension of the state agricultural sector itself through the creation of the sector of AR. The consolidation of agrarian structures along such lines, or simply the homogenisation of the agrarian mode of production via an extension of capitalist relations, is one of the main achievements of the Algerian programme of land reform. As such, as we will argue, such agrarian transformations are ultimately inseparable from the promotion of a policy which directly touches upon the mode of determination of the value of labour power. More precisely, it is an agrarian reformism bound up with the development of capitalism on the basis of cheap labour, for at subsistence levels the price of food is also the price of labour power itself.

The combination of a capitalist transformation of agriculture with the determination of a policy of management of labour power has not however been possible without the overwhelming intervention of the state and the financial means at its disposal. In the last part of this thesis it is precisely our aim to assess the forms under which such an intervention proceeded as well as the conditions under which the reproduction of labour power in relation to the objective of a cheap food policy was achieved. The state regulatory policy of the value of labour power will be also considered with respect to its main levels of intervention resting on a price policy (and a *de facto* wage policy), and an import policy in relation to a nutritional goal determined on the basis of the supply of a given set of wage goods.

PART IV

THE MODE OF REGULATION OF LABOUR

POWER AND

THE STATE OF FOOD NEEDS.

Introduction

The management of food needs in Algeria is the product of a specific context, that of an intensive process of capital accumulation in industry resulting in the rapid extension of the wage-earning system, and a corresponding important increase in food demand that on the evidence available the domestic agricultural sector is unable to meet. As such, the mode of management of labour power through the promotion of cheap food policies, is an integral part of capital accumulation whose development based on the preservation of the formation of a rate of profit below which the process of capital diffusion can be in jeopardy, requires the direct management of low wages (as the embodiment of capital the state appears as the main social regulator of capitalist relations). Along such a line of argument our implicit assumption is that the valorisation of capital - and its related conditions of production of surplus produce - in the context of peripheral capitalism, by its very nature, requires precisely such a condition.

The conditions under which the regulation of food demand emerged were directly associated with state management. The weight of state intervention is also such that it has become the main regulator of food needs. From the standpoint of realisation of such a policy, the insufficient contribution of agricultural surplus to the physiological reproduction of labour power appears both directly under the form of a persistent level of food imports (25% of the value of total imports are devoted to food imports) and indirectly through the structural shrinking of agricultural export proceeds contribution to meet food imports (the value of agricultural exports in agricultural imports evolved as follows: 408% in 1938, 379% in 1948, 166% in 1958, 86% in

1968, 6% in 1980, and 2% in 1985).

Beyond initiating the setting up of an industrial system of production (as seen in Part II), it was therefore oil rent which still provided the condition of realisation of the management of food demand. The chronic stagnation of agricultural production (as seen in Part III), meant that the reliance on the international food market acquired *de facto* a prominent weight in the daily diet of the Algerian population. The study of average intakes reveals from that standpoint the overall characteristics of food consumption and the trend of its structure. As such, this study epitomises at this immediate level the nature of the relation between the respective contribution of domestic agriculture and international trade.

Translated in nutritional terms, the assessment of food consumption reveals also the two main characteristics of food consumption in Algeria: the overwhelming overall weight of cereals calories in the average diet of Algerians, and the degree of social differentiation between social groups, expressed in terms of both calorie intake and particularly animal proteins. The determination of the overall pattern of food consumption is also seen as a direct reflection of the conditions under which economic surplus in general and agricultural surplus in particular is being distributed between the different social groups. The dominant relations of production within the agricultural sector (as seen in Part III), and the mode of valorisation of industrial capital through the mode of state consumption of oil rent (as seen in Part II), emerge as the main mechanisms which govern the circulation and distribution of food products.

The management of food constraint, because of the necessity of allocating a fraction of oil rent away from capital accumulation to meeting domestic food demand, has more and more acquired the status of a policy *à part entière*. Through state intervention the reproduction of an increasing fraction of the labour force is thus determined. The supply of wage goods at fixed prices constitutes the corner-stone of the state food policy of intervention (wage policy being by definition dominated by a rigid form of nominal state wage revision). As such this policy's aim is, in the last analysis, the

determination of the value of the labour force at the lowest possible cost. The rationale requirement of a cheap labour force compatible with an intensive policy of capital accumulation is however accompanied by the *de facto* exclusion of products such as red meat, fruit and vegetables from the scope of intervention and price control, a category of products catered for mainly by the private capitalist sector.

The massive injection of incomes accompanying the industrialisation programme, coupled with the drop in agricultural labour productivity, has meant that the above category of products underwent the highest price increase while fixed price products by definition experienced an over-consumption trend for low income groups. Moreover, while the share of food expenditure in the income of households rose, mainly under the impact of free determined price products (as well as a result of the persistence of a food determination of wages), the development of a capitalist agriculture based on the promotion of products with a high added value and a comparatively low nutritional value (mainly fruit, vegetables and meat), at the same time created the potential for a diversion away from the domestic production of wage goods with a high nutritional value (mainly cereals, pulses, milk), but with a low added value as a result of the state's policy of price stabilisation. The pressure from commercial agriculture therefore contributes to an increase in state intervention in order to take account of the parallel increased over-consumption in fixed price products. So far only the weight of state agriculture and its authoritarian management have been able to prevent the full effects of such a tension between the two markets (the *de facto* diversion away from state marketing networks of a fraction of the production - particularly for fruit and vegetables - of the "self-managed" sector in favour of the private marketing network is an indication of the mechanisms of attraction exercised by high prices).

The constancy of the state food policy based on the supply of wage goods at a fixed price was essentially exercised through three main favourable factors: favourable domestic producers prices (until the 1980s, domestic producers - particularly those of the

public sector - were put to the contribution of such a policy of price stabilisation with the result that producer prices were literally frozen for over two decades); exceptionally favourable international oil prices (particularly from the early 1970s to the mid-1980s) and relatively low international food prices as epitomised by the existence of American and particularly European food surpluses.

The role of oil rent, by both bridging the gap between production and food demand, enabling therefore the supply of wage goods at fixed prices, also contributed to specialising agriculture into two main sectors: a fully private capitalist agriculture regulated by the demand of high income groups dominated by "luxury" products on the one hand, and a fully administered state capitalist agriculture regulated by the demand of low income groups dominated by the market of wage goods supplied at fixed prices increasingly dependent on food imports - particularly cereals - as a result of a persistent stagnant agricultural production on the other.

Let us see more in detail how the configuration of food consumption and its social patterns were intimately interrelated with the state food regulatory policy of labour power.

CHAPTER I

FOOD CONSUMPTION IN ALGERIA

Introduction.

Food consumption, as the direct expression of food needs, is based on a social determination which dictates the specific historical conditions in which consumers find themselves (1). Whether in its content, value or nutritional dimension, food consumption always displays such a social - and necessarily transient - character. As a result of the specific conditions under which the post colonial capital accumulation of Algeria is being operated, the study of food consumption is the study of the spontaneous conditions under which the different social groups assume their own reproduction, but a reproduction that remains inseparable from capital accumulation itself: the determination of the value of labour power, in which the subsistence content is the major component, is also indirectly the determination of the economic surplus potentially available for investment purposes. In that context "the needs that production satisfies are the needs of production itself, the demand of its reproduction" (2). It is only under the methodological framework of such a mode of determination that the analysis proceeds to the study of the terms of access of the different social groups to food consumption. In particular an attempt will be made to highlight the features of the main emerging dominant food models as well as their significance in relation to the organisation of agricultural production, food imports and nutritional considerations.

I. Preliminary methodological remarks.

The study of food availability is derived from two main sources: Food Balance Sheets (FBS) and Household Budgetary Surveys (HBS) or Household Expenditure Surveys (HES). FBS are by far the most immediate way of starting an investigation into the food situation of any given country. Their construction based on a routinely statistical compilation of relevant data makes them a relatively attractive and practical tool of

food investigation. Beyond considerations pertaining to their degree and scope in data collection, which are usually underestimated (3), their use remains rather limited in many ways. Indeed the data available from them are related to aggregate averages which only provide indications about the relationship between total population and the total (or particular) food consumption (in fact food supply) available for consumption. The use of food availability does in fact take into account provision for other uses: waste, seed, animal feed , etc . What the data available through FBS do not and cannot say is how food is being distributed between the different social groups or classes. When one relies on average measures to conduct a study on food consumption through food availability, one has to assume a homogeneous population with undifferentiated income levels, an assumption rather remote from the forces that shape the structure and magnitude of the diversity of consumption. As such FBS can only lead to four main uses: The determination of the average level of food consumption of a given country as a result of the trends of growth of agricultural production, food imports and population. The structure of food consumption within its nutritional dimension. An international classification of countries according to their per capita food profile. A tool to cross-check the findings of HES.

The straightforward policy implications of such an approach are mainly of two kinds. How to increase the level of food consumption (which is incidentally the level of food availability), either through domestic production and/or imports, to meet the theoretical food requirements of the population as a whole. In an opposite direction, FBS also serve the purpose of establishing the surplus of food availability *vis-à-vis* the theoretical needs of the population. As such their purpose is to determine the extent of food exports. Perceived from that angle, this type of policy implication takes for granted that the main constraint being food output, an increased food supply automatically translates itself into more food for every one, leaving aside the existence of the economic mechanisms of income generation and distribution. "Efforts devoted to expanding the output of allegedly key commodities, e.g., food, are exposed as being inadequate because of the lack of connection between changes in production and changes

in purchasing power in the hands of the poor" (4). The second major policy implication derived from FBS raises the question of how to change the structure of per capita food supply in terms of the weight attached to vegetable products and animal products so as to assure a richer nutrient diet for the population as a whole.

Given the limits attached to the use of FBS, HES will be our main source of study of food consumption (the use of FBS will be used mainly for cross-checking purposes). Since the early 1960s five main household surveys were carried out in Algeria. Each one carried its own objectives and scope. The 1959 household survey was carried out by France before the political independence of Algeria. The 1967 survey of "Grand Algiers", was to assess the food situation of Algiers and its communes. The first global household expenditure survey of 1968 was carried out before the launching of the industrial policy programme of Algeria in 1970 and was conducted by A.A.R.D.E.S (Algerian Association for Demographic, Economic and Social Research). A partial survey in 1977 was limited to the study of the rural households of the private agricultural sector. The 1980 HES concerned the total Algerian population. In our present investigation our concern will be restricted to the two main Surveys: that of 1968 and that of 1980 (5).

II. The major findings of the 1968 survey.

A. Methodology.

The survey was based on the method of interviews for considerations pertaining to the household income level and the amount of food consumed at dinner times. The actual weighing method was limited to food consumed at lunch time only. The survey was based on the communal (i.e. the smallest administrative subdivision of the territory) distribution of the population derived from the 1965 census (6). The presentation of the results of the survey in each stratum focuses on 18 socio-professional categories (SPC), each with its weight within the population including: Permanent agricultural workers (16.8%) (7), Retail traders (0.3%), Handicraftsmen & handicraft workers (7.2%), Middle executives (4.1%), Clerks (1.7%), Permanent & temporary workers (3.3%), Other permanent unskilled workers (5.3%), Other temporary unskilled

workers (1%), Self-employed in petty jobs (0.7%), Law & security enforcement members (4.7%), Retired (7.1%), Unemployed (3.8%), Rentiers (97.1%), Employees & wholesale traders (13%), Liberal professions & top executives (0.4%), Employed in services (2.3%). The findings of the HES represent food consumption in three manners: In quantitative terms corresponding to the amount of each category of food product consumed by each socio-professional category (S.P.C) in each stratum, in qualitative terms corresponding to the level of calorie intake, the proportion of proteins by type of food origin, the level of fat, etc. and in relation to income level.

B- The quantitative findings of the HES (8).

a-Distribution of food consumption by stratum and region.

Table IV. 1.1: Structure of food intakes (U=kg/person/year)in 1968.

	Grand Algiers	Northern Strata			Northern Algeria	Southern Algeria	Algeria without Grand Algiers	Algeria
		1	2+3	4	Algeria	Algeria		
<u>CEREALS</u>	1 1 0	1 6 0	2 3 3	2 5 2	2 2 5	1 2 8	2 1 7	2 0 8
Hard wheat	40	95	138	165	143	88	138	130
Soft wheat	59	55	44	23	35	35	35	38
Barley	11	10	51	64	47	5	44	40
Bread	93	51	27	9	22	38	23	29
Potatoes	41	30	20	17	21	16	20	22
Pulses	14	8	7	6	6	5	6	7.0
-Fresh	12	6	3	2	3	3	3	4.0
-Dry	2	2	4	4	3	2	3	3.0
<u>VEGETABLES</u>	6 6	4 5	3 0	2 1	2 9	5 3	3 1	3 3
<u>FRUITS</u>	5 4	2 9	2 7	2 1	2 4	5 6	2 6	2 9
-Fresh	50	27	22	15	19	15	19	21
-Dry	4	2	5	6	4	41	7	8.0
<u>MEAT</u>	1 6	1 3	9	9	1 0	1 2	1 0	1 1
Bovine	1.6	1	1	.5	1	.4	.6	0.7
Ovine	11	10	5	6	7	8	7	8.0
Poultry	1.5	.6	.4	.4	.4	.4	.2	4.5
Eggs	1.5	.6	.4	.3	.4	.5	.4	0.5
Other	4	.8	2.2	1.8	1.2	2.9	1.6	1.3
Fish	3	3	1	.6	1	.2	1	1.3
Oil & fat	13	11	9	9	10	10	10	10
of animal origin	2	1	1	1	1	1	1	1.0
vegetable oils	11	10	8	8	9	9	9	9.0
<u>Animal prod.</u>	2 1	1 7	1 1	10.6	1 2	13.2	1 2	12.3
<u>including animal fats (sub total)</u>								

Source: Autrey, M. Ibid. P. 98.

From one stratum to another there were significant differences. With a few exceptions,

the Southern population hold the lowest intakes of Algeria, particularly for cereals, pulses, milk and fish. In turn Northern Algeria offers its own contrasts. Patterns of food intakes vary considerably between the urban stratum and the rural stratum. Grand Algiers, which offers the best profile of an urban food consumption, has the lowest cereal intake of all strata (110 kg). At the other end of the social spectrum, the rural stratum with 252 kg of cereal intake, holds the highest consumption level. On average, a rural consumer consumes twice as much cereals as his urban counterpart. In turn the structure of cereal intake tends to be altered under the impact of an emerging urban pattern of consumption dominated by soft wheat and bread. The proportion of hard wheat, a typically traditional staple, tends to decrease with the degree of urbanisation. Thus, if the rural consumer consumes four times as much hard wheat as his counterpart in Grand Algiers, conversely the latter consumes nearly three times more soft wheat than the former. This trend is best evidenced when we look at the quantity of soft wheat-based bread consumed in each category of stratum: 93 kg in Grand Algiers, 51 kg in the urban stratum, 27 kg in the intermediate stratum and 9 kg in the rural stratum. If, on a whole, urban consumers experience the lowest cereal intake, they however display the highest intake for all other food products, i.e. pulses and particularly fresh pulses (broad beans, peas, beans..), vegetables, fruits, meat, offal, poultry, eggs, fish, sugar and oil & fats.

Southern Algeria is a different case. Though the Southern population displays the lowest cereal intakes compared to those of Northern Algeria (without Grand Algiers), it does not however experience any increased intake for other products except for vegetables (an intake lower than that of Grand Algiers and greater than that of stratum 1), sugar (the highest intake (9) of all Algeria), meat (meat consumption in the South bears a relation to the nomadic economy based on sheep farming and date farming, the Algerian nomadic population being essentially of a Southern origin), and dried fruits (dates). The South experiences the lowest intakes for roots & tubers (16 kg against 37 kg for stratum 4 and 41 kg for Grand Algiers), pulses (5 kg against 6 kg in the rural North, 8 kg in the urban stratum and 14 kg in Grand Algiers) and animal products in general

(32 kg against 44 kg in the rural areas, 50 kg in the urban stratum and 93 kg in Grand Algiers).

From the above characteristics, one can distinguish three main models of food consumption. Firstly, a southern model with a low intake of cereals and animal products, and a high intake of vegetables. As such, this model appears as an hybrid model. By certain aspects it is a rural model (low proportion of animal products) and by others it is an urban model (low proportion of cereals). Such characteristics depict this model as the poorest of all. Secondly a rural model typified by the highest intakes of cereals (particularly hard wheat and barley) and low intakes of animal products. This model is a grain-based diet par excellence. Thirdly an urban model characterised by a low intake of cereals consumption (particularly hard wheat and barley), the highest intakes for animal products as well as for fish, vegetables and fruits. This model is rich in terms of both the variety of products and of the quality of food in the form of animal products. As such it is close to the profile of food diet prevailing in developed countries. At an aggregative level, the above patterns of food consumption apply to the following populations: 3.5 million persons (or 30% of the total population) for the urban model, 7.6 million persons (or 63% of the total population) for the rural model, 0.9 million persons (or 7% of the total population) for the Southern model. But such a level of aggregation is bound to hide considerable differences depending on fractions of the population belonging to given social groups according to their economic position and their economic power of command, as expressed by the share of the social product accruing to them. The aggregated presentation of food intakes by stratum ought to give place to a disaggregated presentation by social category in order to judge the terms of access of the different fractions of the population to food supply (domestic and international).

b. Food consumption by Socio-economic categories: a quantitative approach.

The presentation of daily intakes for each stratum according to the 18 SPCs, and for the main food products is heavy and cumbersome at this level. Instead, we will attempt to

highlight, in a horizontal presentation (the comparison between SPCs), the degree of discrepancy existing in each stratum between the SPCs experiencing the lowest and the highest intakes. In so doing we enable our horizontal presentation of the SPCs, i.e. independently of their respective strata, to be complemented with the extent of the gaps existing within each stratum.

1. Horizontal presentation of food intakes between SPC: the case of the highest and lowest intakes.

Table IV. 1.2: Food discrepancies between social groups (U=kg/person/year) in 1968.

Stratum	Product	SPCs with Highest intake	Highest intake	Lowest intake	SPCs with lowest intake	Gap of the gap	% extent
1	Cereals	Permanent agr. workers	217	107	Handi..& handi. workers	110	50%
2+3	/ /	Farmers	294	157	Clerks	137	46%
4	/ /	Season.agr. workers	285	171	/ /	114	40%
South	/ /	Non-qual. workers	145	101	Seas. agri. workers	44	30%
1	Barley	Seas.agri. workers	35	2	Middle exec	33	94%
2+3	/ /	Farmers	76	8	Services	68	89%
4	/ /	/ /	81	12	Middle exec.	69	85%
South	/ /	Retired	9	1	Non-qual. workers	8	89%
1	Bread	Law & sec. members	73	23	Farmers	50	68%
2+3	/ /	Services	68	4	/ /	64	94%
4	/ /	Clerks	36	4	/ /	32	89%
South	/ /	/ /	73	6	Seas. agri. workers	67	92%
1	Animal. prod.	Employees + whol. sale trad.	119	23	Unemployed	96	80%
2+3	/ /	Farmers	57	20	Seas.agri. workers	37	65%
4	/ /	Middle exec.	70	12	Unemployed	58	83%
South	/ /	Clerks	61	11	Seas.agri. workers	50	82%
1	Pulses	Employees + wholesale trad.	27	2	Seas. agri. workers	25	92%
2+3	/ /	Retail traders	11	5	Perm.agri. workers	6	54%
4	/ /	Law & sec. members	31	2	Temporary employed	29	93%
South	/ /	Clerks	9	2	/ /	7	78%
1	Vege.	Employees + wholesale trad.	128	52	Temporary employed	76	59%
2+3	/ /	Clerks	100	38	Farmers	62	62%
4	/ /	Law & sec. members	122	16	/ /	106	87%
South	/ /	Qual.workers temp. empl.	155	36	Seas. agr. workers	119	77%
1	Fruits	Law & sec. members	54	14	Temporary employed	40	74%
2+3	/ /	Clerks	46	10	Seas. agr. workers	36	78%
4	/ /	Middle exec.	38	7	Unemployed	31	81%
South	/ /	Farmers	92	25	Temporary employed	67	73%
1	Milk	Employees + wholesale trad.	66	14	Unemployed	52	79%
2+3	/ /	Farmers	40	11	Temporary employed	29	72%
4	/ /	/ /	38	7	Unemployed	31	81%
South	/ /	Clerks	31	3	Qual.workers	28	90%

Source: Computed on the basis of M. Autrey's report.

The above reveals extreme inequalities. The rates of discrepancies range from 30% for cereals (the lowest discrepancy of all) to well above 90%. The relatively low rates for cereal intakes show the pre-eminence of cereals in the overall diet of the population on the one hand, and the type of model of reference on the other (in that case the extent of the discrepancy can better reflect the expression of the model of reference (10) -

urban or rural - rather than that of a given deficit). As will be seen in the next chapter, the terms of discrepancies cannot be assessed without having in mind the "status" of the food products involved. Broadly speaking, two main categories of products ought to be distinguished: subsidised products, of which cereals are the main component, and non-subsidised .

The most significant aspect of discrepancy rates is by no means their ability to identify the recurrent SPCs which are to be found at the highest levels and/or at the lowest levels of food intakes depending on the underlying model of reference. The SPCs which display the lowest food intakes are to be found among those categories whose diet is essentially a grain-based diet. They include: agricultural workers (seasonal & permanent), the non-agricultural workers who are temporary employed, the unemployed, the unskilled workers and the farmers (11). If, however, one is to extend this list to the social categories which display similar intakes (12), it would extend to the self-employed in petty jobs, the retired and the employed in services. For non-cereal products the SPCs with the highest intakes are to be found among employees & wholesale traders, farmers (the superior income fraction), middle and top executives, Law and security enforcement agents, clerks, and qualified workers.

In all, the SPCs with the immediate lowest non-cereal intakes, i.e. excluding those approaching such levels, represent about 60% of all Algerian households. In comparison, those with the highest intakes represent about 13% of all households. Thus, as far as the level of intakes goes, the Algerian diet is very unequal in its social distribution. This is an important recurring characteristic of the food situation in Algeria. Viewed from a different angle, i.e. independently of their distribution by stratum, the overall distribution of SPCs by food intake, reveals another perception of the unequal terms of access to food consumption.

2. Vertical/hierarchical presentation of food intakes by SPC.

Such a presentation concerns the main food products.

Table IV. 1. 3: Cereal intakes for Algeria without Grand Algiers (U= kg/person/year) in 1968.

Socio-Professional Categories	CEREALS				Total
	Hard wheat	Soft wheat	Barley	Bread	
All SPCs (average).	138	35	44	24	217
Farmers	168	20	79	5	268
Permanent agricultural workers	138	48	31	18	217
Seasonal agricultural workers	159	28	68	7	255
Retail traders	98	45	19	43	162
Handicraft & handicraft workers	205	34	66	32	206
Middle cadres	102	59	6	56	168
Clerks	84	59	7	56	150
Qualified workers	112	47	16	43	177
Unskilled workers permanently employed	133	39	26	38	198
Unskilled workers temporary employed	120	45	33	20	198
Self-employed in petty jobs	120	35	32	16	187
Law & security enforcement members	99	56	11	54	166
Retired	154	28	38	21	221
Unemployed	111	27	38	22	176
Rentiers	121	169	18	37	169
Employees & wholesale traders	92	65	3	54	161
Liberal professions & top executives	40	122	0	98	122
Services	102	166	9	52	160

Source: Ibid, Table A 3.1. pp. 178-179.

Here again we find the same characteristic of inequality, and on a wider range, existing between the different social groups. The inequality in question is a two level inequality: an overall inequality which expresses itself in the actual level of intakes for each product (this is the quantitative aspect of inequality), and an inequality based on the proportion of each category of product in the diet of each social category (this is the qualitative aspect of inequality).

For the population as a whole, the weight of cereals is quite high: 217 kg/head/year or the equivalent of about 600 g/day/head. The weight of cereals is associated with the high level of cereal consumption of farmers, (268 kg), permanent agricultural workers (217 kg), seasonal agricultural workers (255 kg), handicraft & handicraft workers (206 kg), the retired (221 kg), unskilled workers with permanent employment (198 kg), unskilled workers with temporary employment (198 kg) and the self-employed in petty jobs (187 kg), all of which represent over 70% of total households (13). The lowest cereals intakes are to be found mainly among the categories of employees & wholesale traders (161 kg), liberal professions & top

executives (12 kg), the rentiers 169 kg), clerks (150 kg) and middle cadres (168kg).

The imbalance in the consumption of other products is even more pronounced (14). The categories with the lowest intakes in pulses are the agricultural workers (between 3 and 4 kg), the handicraftsmen & the handicraft workers (5 kg), the self-employed in petty jobs and the unskilled workers with temporary employment (3 kg). At the other extreme, the employees & wholesale traders consume 20 kg (over 6 times the intake of the self-employed in petty jobs or the agricultural workers), the liberal profession and top executives (13 kg), the clerks and middle cadres (10 kg). The highest consumption of fresh pulses is also within these categories. The highest intake of fruits, vegetables, animal product and oil & fat are to be found with the same categories of liberal professions & top executives, wholesale traders & employees, rentiers, middle cadres, law & security enforcement members.

The particular distribution of animal products consumption is worth considering on its own. The unemployed with 16 kg, the unskilled workers with temporary employment with 18 kg, the retail traders with 29 kg, the self-employed in petty jobs with 27 kg and the agricultural workers with an intake between 22 and 29 kg are the categories with the lowest intakes of all (such intakes range from 44 to 80 g/day/person). At the other end of the social spectrum, liberal professions & top executives have an intake of 124 kg, the employees and wholesale traders an intake of 95 kg, or the equivalent of between 264 to 344 g/person/day. Middle cadres, law and security enforcement agents clerks and rentiers consume respectively 78 kg, 64 kg, 60 kg and 56 kg, or the equivalent of between 156 and 216 g/person/day.

If one looks at the structure of the diet from the point of view of each category of product according to its physical weight alone (a broad measurement of the degree of differentiation, and as such an anticipated indication of the nutritional differences between intakes), the result can be expressed and typified on the basis of the diet of liberal professions and wholesale traders on the one hand and agricultural workers on

the other (the selection of these two categories is dictated by the extreme distribution of their intake).

Table IV. 1. 4: Structure of intakes between two typical social groups in 1968 (% weight).

Commodity	Agricultural workers intake	Liberal profession & wholesale traders intake
Cereals	66.0%	22.0%
Pulses	1.0%	2.0%
Vegetable	13.0%	29.0%
Sugar	4.0%	3.0%
Fruits (dry)	3.0%	2.0%
Fruits (fresh)	5.0%	17.0%
Animal products	7.0%	22.0%
Vegetable oils	2.0%	3.0%
Total	100	100

Source: 1968 HES

Similarities emerge for the consumption of three products (15): Pulses: 1% of the quantity of food consumed by agricultural workers, 2% of the quantity of food consumed by liberal profession and wholesale traders. Sugar: 4% of the quantity of food consumed by agricultural workers, 3% of the quantity of food consumed by liberal professions and traders. Vegetable oil: 2% of the quantity of food consumed by agricultural workers, 3% of the quantity of food consumed by liberal professions and wholesale traders. The difference in the structure of both diets is shown by the gap existing between the other main products. If the first diet (that of agricultural workers) is mainly based on cereals (66%), the second one is however more balanced between cereals (22%), vegetables (29%), fruits 17%) and animal products (22%). In the second diet cereals and animal products represent the same weight. Outside vegetables (13%), the first diet is strictly a grain based diet with the proportion of other products averaging between 5 to 7% of total intake. The superior social category consumes more in quality and more in quantity. The polarity of these two diets is therefore what characterises best the food intake of the Algerian population as a whole (the overall social distribution of intakes is therefore not only differentiated but also polarised). We now turn to the nutritional significance of such intakes.

C. The nutritional aspect of food intakes of the Algerian population.

The nutritional measurement of food intake is expressed in terms of calorie or energy needs (calorie units per day), protein (number of grams per day), fat needs (number of g per day) and Vitamin needs (number of microgram/day). These needs are theoretically determined in relation to a man aged between 20 and 39, weighing 65 kg and a woman of the same age and weighing 55 kg, both of whom enjoy a good health. Such needs are determined on the basis of an economic activity of 8 hours, the remaining hours being spent for 8 hours in sleep, and the rest performing a light activity. It goes without saying that the gap between the nutritional needs of the man and woman of reference, an ideal prototype, and the characteristics of the actual population can be quite considerable. This is particularly so when one considers a population of an underdeveloped country living in poor sanitary conditions, subject to health hazards, performing economic activities of different intensity and requiring different duration, and experiencing a high rate of malnutrition and/or undernutrition (16). The determination of nutritional needs on such a methodology is bound to convey unavoidable limitations and reserves. In other words "... recommended intakes are not an adequate yardstick for assessing health....because each figure represents an average requirement " [our emphasis] (17).

a- The determination of calorie needs.

It is a determination based on the age and weight of the man and woman of reference (18). As such the determination is a minimal determination in order to make provision for incidence of malnutrition or illnesses which, as will be shown at a latter stage, are prevalent among the Algerian population and particularly the high risk population of children and women in general and pregnant and/or lactating women in particular. Moreover, such a minimal mode of determination ought also to take into account the incidence of the real conditions associated with a given activity: the factor of a professional activity with its intensity, the conditions and duration of transport etc.

On average the recommended minimum intake (19) suitable for a healthy population is established at 2,206 calories a day but if we are to make provision for the loss of

calorie which inevitably takes place between the purchasing phase and the final intake, the recommended calorie intake ought to be adjusted. M. Autrey sets this level at about 2,400 calories. Other estimates set at a much higher level the minimum intake compatible with the reproduction and maintenance of health without the danger of malnutrition (Dr. Paul Lunven, the current Director of Nutrition at the F.A.O, sets at 2,500 calories the safer level (corresponding to 1.4 times the level of basal metabolism which is the level of requirement of cells at rest), beyond which the danger of malnutrition can be avoided) (20).

b- The determination of protein intake.

The function of proteins is mainly for growth and tissue synthesis purposes. Their function can also be an energy function but only when calorie intake requirements are not adequate. The determination of protein needs is either calculated in terms of protein of reference, which is of a higher value, i.e. containing more amino-acids (usually milk or the egg protein with a biological value equal to 100%), or in terms of food protein, i.e. which possess a lower nutritional value depending on the composition of the food diet, or mixed protein of animal and vegetable origin (the biological value of the food protein of the Algerian diet has been estimated by M. Autrey at 57%).

The methodology of determination of protein needs is that set by the F.A.O in 1963 (21). The requirement for an average protein intake *ceterus paribus* is 31 g in terms of the protein of reference, or between 0.57 and 0.52 g/day per kg of body weight (F.A.O and W.H.O, 1971), 54 g in terms of food protein (of a biological value equal to 57%), to take into account the lower content of nutrient elements in terms of amino acids, and about 60 g of food protein at purchase level, to make provision for waste occurring before and after the actual act of consumption (a 10% rate of waste is considered to be a reasonable rate in normal conditions).

It is, however, well established that protein and calorie requirements cannot be established independently of each other. In particular, it has been shown that when calorie needs are not met, protein intake is diverted to cover calorie needs. In other

words, it is the calorie requirement that determines the degree of utilisation of proteins to meet physiological needs. As such the emphasis ought to be put on calorie requirement first and protein second (22). The logic of this proposition is derived from the fact that since calorie and protein come together, the emphasis on the former can only result in the increase of the latter when the critical level of calorie requirements is first met.

c- Profile of the nutritional intake of the population.

The main nutritional findings by stratum can be summarised in the following manner using the two main measures: the level of calorie and protein intake.

Stratum 1: average calorie intake: 2,300 calories and 66 g of proteins; Stratum 2 +3: average calorie intake: 2,700 calories and 84 g of proteins; Stratum 4: average calorie intake: 3,100 calories and 96 g of proteins; South : average calorie intake: 2,100 calories and 55 g of proteins. In terms of calorie requirement it appears that the Southern population is well below the level of 2,400 calories. The urban stratum can be considered to be meeting the necessary requirement. Stratum 2+3 and particularly the rural stratum have the highest calorie and protein intake.

On the whole the nutritional situation of the Algerian population appears to be better in rural areas than in urban centres. But this is only so if looked at from the point of view of the energy requirement for, from one stratum to another, the nutritional differences of intakes remain important.

Table IV. 1. 5: Nutritional characteristics of intakes in 1968.

Stratum	Total calories	Share of cereal calories (%)	Total proteins g	Share of cereals proteins		Animal proteins		Other veg. proteins	
				g	%	g	%	g	%
1	2,300	68%	66	51	77%	9	14%	6	9%
2+3	2,700	76%	85	72	85%	7	8%	6	7%
4	3,100	80%	96	85	89%	6	6%	5	5%
South	2,100	55%	55	40	73%	7	13%	8	14%

Source: Ibid. pp. 106,109,112 and 113.

The main source of supply of calories and protein is cereals. As such, to a more or lesser degree, the diet of all strata is essentially a grain based diet. It is in the rural

stratum that cereals contribution is the highest as it provides for 80% of total calories and nearly 90% of all proteins.

In urban centres, this contribution is less important as it provides 66% of calories and 77% of proteins. It is in this stratum that the contribution of animal proteins is the highest (14%), while that of the rural stratum is the lowest (6%). From the point of view of the contribution of cereals and animal products, the diet of stratum 2+3 with 76% of cereal calories and 72% of cereal proteins, is essentially a rural diet while that of the Southern population is typically an urban one. On the whole, the rural diet is mainly a high cereals calorie based diet, while the urban diet is mainly a lower cereal calorie-animal product based diet. The overall presentation of intakes by social category, which allows us to assess the variability of diets and their nutritional characteristics is as follows.

d- Nutritional characteristics of the diet of the population.

The overall picture of the diet of the population can be summarised in the following manner:

Table IV. 1. 6: Average per head intakes (Algeria without Grand Algiers) in 1968.

	Calories	Cereals	Animal	Proteins	Animal	% of animal	% of cereals
		calories	calories	(g)	Proteins	Proteins	Proteins
All SPCs (average)	2,770	75%	6%	8.4	7	8%	85%
Farmers	3,200	80%	5%	10.3	8	7%	87%
Permanent agricultural workers	2,800	75%	4%	8.2	6	7%	87%
Seasonal agricultural workers	3,033	8%	33%	9.4	4	5%	92%
Retail traders	2,305	67%	9%	6.8	10	15%	78%
Handicraft & hand. workers	2,590	75%	5%	7.7	6	8%	86%
Middle cadres	2,700	60%	13%	7.7	16	21%	69%
Clerks	2,400	60%	10%	6.5	11	17%	72%
Qualified workers	2,500	68%	7%	7.3	8	11%	78%
Unskilled workers perm. employed	2,560	74%	6%	7.6	7	9%	84%
Unskilled workers temp. employed	2,300	79%	3%	6.9	3	5%	90%
Self-employed in petty jobs	2,600	78%	4%	7.3	5	6%	89%
Law & sec. enforcement members	2,600	61%	11%	7.4	13	18%	72%
Retired	2,980	74%	8%	8.7	6	7%	86%
Unemployed	2,200	82%	4%	6.4	3	5%	91%
Rentiers	2,500	66%	8%	7.3	9	12%	77%
Employees & wholesale traders	2,700	57%	16%	7.8	19	24%	65%
Liberal professions & top executives	2,600	45%	19%	6.9	23	33%	61%
Services	2,250	70%	7%	6.5	8	12%	80%

Source: Ibid. pp. 90-100.

The above table offers the best illustration of the different nutritional characteristics of the two main diets.

1. The high cereal-calorie diet.

It provides us with two main varieties: the low cereal-intake variety on the one hand and the high cereal-intake variety.

The low intake variety is best illustrated with the structure of the diet of the unemployed where a low level of calorie intake of 2,200 was achieved with a high proportion of cereals (82%). The case of unskilled workers with temporary employment is another similar example: with a high cereal contribution (79%), the level of calorie intake is as low as 2,300.

The high cereal intake variety provides the highest calorie level of all diets (including the low cereal intake/high animal intake). This diet is best exemplified by farmers (3,200 calories) and agricultural workers (3,000 calories).

2. The low cereal-calorie diet.

It is the diet of the well off urban categories. This type of diet can be subdivided into two categories: the low cereal calorie diet with a high animal intake content on the one hand and that with a low animal intake content on the other.

The first sub-category is best exemplified by the nature of the diet of the category of liberal professions and top executives: 45% of cereal calories (the lowest cereals contribution of all categories) and the highest contribution of animal products for both proteins (33%) and calories(19%). Employees and wholesale traders experience an identical diet with 57% of cereal calories, 16% of animal calories and 24% of animal proteins.

The second sub-category of the low cereal calorie diet is illustrated by the diet of retail traders: 67% of cereal calories, 9% of animal calories and 15% of animal proteins. The cereal calorie diet is shared as well by middle managers, clerks and to a certain degree, by qualified workers and by law and security enforcement agents.

On the whole, if the first type of diet (a) is rich in calories, it is however poor in terms of non-cereal products. The second type of diet (b), less based on cereals, is more varied and balanced and as such, it is much richer than the rural diet, particularly in terms of vitamins and amino-acids. Of all diets the worst off in terms of nutritional requirement are the high cereal-calorie diet with a low cereals intake and the low cereal calorie diet with a low animal intake, i.e. the two diets which are poor in both animal and cereal content.

The broad dichotomy which so far characterised both the quantitative distribution of food products as well as their nutritional content, derives from two main sets of factors: immediate factors, i.e. those which directly bear a relation to the actual food consumption (size and structure), and mediate factors, i.e. those which precisely account for the mode of distribution of food products between the different social groups as epitomised by the selection of the 18 socio-economic groups. If the first set of

factors explain the observed patterns of food consumption, the second set of factors highlight the social conditions under which such a consumption is operated. In what follows, our concern will be mainly with the study of the main determinants pertaining to the immediate factors.

D- Food consumption and income.

Food consumption and its pattern is determined by the combination of several variables: the family size and its structure by age and sex, the level of income, the level of food prices, the existence of alternative sources of food supply (family gardens, etc.) and cultural and historical food habits, etc. In what follows our aim is to concentrate mainly on the income side.

In an economy based more and more on commodity relations, income emerges as the main channel of access to food (23). But it is certainly its level and particularly its nature (wage, pension, profit), which are the determinant influences in shaping food consumption. The variety of situations can stretch from one extreme to another: from a situation where income level is the main constraint which stands in the way of meeting the needs of the household unit according to its size and structure, to a situation where the level of income is not the constraint standing in the way of meeting the food needs in accordance with their cultural and nutritional requirements (24). The weight of food expenditures in total income varies from one social category to another. For the social categories with little alternative sources of food supply, and for low income levels, the proportion of income accruing to food is the highest. When the possibility of self-consumption exists, the relation between income and food consumption is looser. The following table evidences the diversity of such situations.

Table IV. 1. 7: Share of income devoted to food (%) in 1968.

Expenditure levels	AD 0-20			AD 201-400			AD 401-800			AD 801-1,800			AD 1,800 +			TOTAL		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Total	65	62	65	60	59	60	56	55	56	48	48	48	42	41	41	54	50	57

Source: Ibid., P. 146.

(1) = Algeria without Grand Algiers. (2) = Urban stratum. (3) = Rural stratum.

On the whole the "Algerian population", all social categories combined, allocates 54% of its income to food. It is the rural stratum which spends more on food than its urban counterpart: 57% against 50%. In accordance with the Engel's law the share of food expenditure is highest in the lower income groups: 65% for Algeria without Grand Algiers, for the lowest food expenditure (AD 0-20), and lowest for higher income groups: 42% for the food expenditure (above AD 1,800) (25).

An international comparison of figures relating to the share of income devoted to food offers an illustration of the weight exercised by food expenditure. Independently of an income classification of countries, and despite the existence of a policy of wage goods subsidies, food expenditure in Algeria absorbs the highest fraction of income.

Table IV. 1. 8: Comparative weight of food expenditure in total income (%).

Country	Country as a whole	Urban stratum	Rural stratum	Year
Algeria	54%	50%	57%	1968
Portugal	46%	42%	54%	1968
Sweden	26%	-	-	1969
Tunisia	50%	42%	56%	1966
U.S.A	-	31%	31%	1966
Yugoslavia	41%	-	-	1969

Source: Ibid., p. 146.

The above figures reveal in their own way the overwhelming weight of food in the total family budget. In such a context, once the minimum physiological needs of the population are given, the level of food prices determine the extent of income to be devoted to food (26). The distribution of households by income level tends also to suggest that the majority of the population being concentrated in the lowest income groups, the inflationary pressure of their purchasing power is, in fact, minimal.

Table IV. 1. 9: Household distribution by income level (in AD) and social category (%) in 1968.

Income levels	<u>0-3,000</u>	<u>3,001-5,000</u>	<u>5,001-7,500</u>	<u>7,500-10,000</u>	<u>10,000 +</u>	<u>Total</u>
Farmers	75	11	7	3	4	100
Permanent agricultural workers	91	7	0.6	0.6	-	100
Seasonal agricultural workers	57	32	7	3	-	100
Retail traders	32	34	15	16	16	100
Handicraft & hand. workers	35	30	13	11	10	100
Middle cadres	-	-	20	37	42	100
Clerks	7	15	17	35	15	100
Qual.workers	57	28	8	6	-	100
Unskilled worker perm. employed	22	36	28	12	2	100
Unskilled workers temp. employed	83	13	3	0.1	-	100
Self-employed in petty jobs	57	28	8	6	-	100
Law & sec enforcement members	.2	6	14	66	12	100
Retired	68	20	7	2	1	100
Unemployed	91	2	2	3	2	100
Rentiers	36	3	40	3	18	100
Employees & wholesale traders	38	-	9	12	75	100
Liberal professions & top executives	-	-	-	3	97	100
Services	64	16	12	7	0.6	100
Total	43	19	15	14	8	100
Cumulative total	43	63	78	92	100	-
Income level/person *	0-455	456-758	759-1,138	1,139-1,157	1,518 +	-

Source: *Ibid.*, p. 142. * The average size of an Algerian household is 6.59.

The above table throws some light on the economic structure of the population and, as such, gives an overall picture of the weight attached to the economic significance of the different households. In short, this table is the best illustration of the social pyramid prevailing in Algeria. It shows that 43% of the population, i.e. the absolute majority of the population by income group, has the lowest income level. For the two lower income levels, the proportion increases to 63% of the total population. At the other extreme, 8% of households have the highest income level. This category is essentially represented by liberal professions and top executives, wholesale traders & employees and middle managers. It is this category, as well as that of the income group (AD 7,501-10,000), which is identified with the low cereal calorie diet. In other words, the urban diet draws its characteristics mainly from the high income group categories (the diet of the other section of the urban population with a low income level is only a nutritionally poor version of the dominant urban diet). Those categories within the lowest income group, rural in their majority, are best identified by a diet largely

dominated by cereals (the sole category of farmers and agricultural workers represent over 40% of Algerian households). 80% of the former and about 70% of the latter are located in the rural stratum. For strata 2 and 3 the proportions are respectively 90 and 80%.

Table IV. 1. 10: Food intake and income level (in AD) in the urban stratum in 1968.

	0-200	201-400	401-800	801-1,800	1.801-3,000	3,000 +	TOTAL
Total calorie	2,169	2,161	2,219	2,417	2,678	3,162	2,300
Cereal calories (%)	81%	74%	70%	62%	52%	41%	67%
Animal calories(%)	4%	5%	6%	10%	14%	27%	8%
Proteins (g)	66	63	63	69	75	96	67
Cereal proteins (%)	89%	4%	81%	1%	59%	42%	67%
Animal proteins (%)	5%	7%	9%	17%	25%	46%	14%

Source: Ibid. p. 139.

To maintain a low level of cereal intake, improvement of the urban diet, once income increases, is obtained by decreasing cereal calories and increasing animal calories and proteins.

The decreasing contribution of cereals is much more pronounced at higher income levels than at lower income levels. In contrast, the same pattern of substitution between cereals and animal products can be observed for the rural population, but at a much higher cereal intake level.

Table IV. 1. 11: Food intake and income level (AD) in the rural stratum in 1968.

	0-200	201-400	401-800	801-1,800	1.801-3,000	3,000 +	TOTAL
Total calories	2,882	3,040	3,418	3,570	3,828	4,244	3,100
Cereal calories (%)	84%	81%	75%	72%	67%	67%	79%
Animal calories (%)	4%	4%	5%	17%	7%	8%	5%
Proteins (g)	91	95	100	109	124	129	96
Cereal proteins (%)	90%	98%	86%	81%	70%	77%	88%
Animal proteins (%)	5%	5%	7%	11%	14%	16%	6%

Source: Ibid. p. 140.

On the whole, for the same levels of expenditure, the rural diet remains overwhelmingly dominated by cereals in the form of proteins and calories. The decreasing proportions of cereals in total nutrients, when income increases, remains,

however, a common feature to both the urban and the rural diet. The "urban diet" aspect, (i.e. the extent of substitution between cereal products and animal products), in the rural diet, only appears at a much higher income level corresponding to the expenditure level over AD 1,800 with 67% of cereal calories and 8% of animal calories. The influence of income on the structure of the rural diet on the whole remains a less straightforward relation. Many reasons explain such a pattern. Unlike economic activity in urban areas, the rural economy is still geared towards a market economy, or fully regulated by commodity relations. As such, part of the domestic agricultural production can be excluded from the market network depending on the extent of domestic needs, the proportion of the family labour force employed outside the farm unit, and the importance of wages earned in the total income of the farm, etc.

From the point of view of commodity relations, such a portion of agricultural production not sold on the market is therefore self-consumed. For all these reasons, the importance of self-consumption (27) remains an important characteristic of the rural population in general (the above table in fact includes, in the level of expenditure, the estimated value of self-consumption). From the viewpoint proper to a peasant economy, self-consumption plays a definite social function in the face of increased commodity relations as well as a means of preserving a given pattern of consumption. In this respect, the rural population can be seen as the depository of the traditional Algerian diet. This attitude towards the upholding of certain food practices in accordance with the life style proper to the peasantry is not unique to Algeria (28). This is particularly the case since the rural population is *de facto* at the immediate intersection of production and consumption (29).

The differentiation between the urban and the rural patterns of consumption is also accounted for by the mode of organisation of the food market itself. As a result of the urbanisation of an increased fraction of the population, the organisation of the urban food market, particularly in its wage goods section, has been increasingly regulated, both qualitatively and quantitatively, by a heavy state intervention in the form of an increasing supply of wage goods at fixed prices. Despite the general diffusion of

subsidised goods at national level, state intervention remains a thoroughly urban based intervention. The setting up of the state network distribution of fixed price products in rural areas is peripheral when compared to its densely organised urban implanting. On economic grounds also the organisation of the rural food market is discriminated against particularly under the influence exercised by high incomes on the orientation and specialisation of agricultural production for high price products (meat, fruits, vegetables).

Under the influence of the overall characteristics of urbanisation, the diffusion of the urban model has therefore tended towards its generalisation and as such it has imposed itself on an increasing fraction of the population, particularly when accompanied by an extension of monetisation and commodity relations. After over a decade, the diffusion and generalisation of such an urban model is well established.

III. The 1980 Household Expenditure Survey (HES).

The methodology of the survey is similar to that of 1968. The main objective of the 1980 survey was the study of households expenditures. As such, it was not a survey focused on the nutritional aspect of food consumption (as a result of such a shortcoming, the analysis of the findings of the 1980 HES will be mainly conducted on the basis of a comparative study with the 1968 food situation). The population of reference was established on the basis of the 1977 population census. The estimated survey population was set at 18,234,191 distributed between an urban population of 7,642,980 and a rural population of 10,592,211. The survey distinguished between two main strata: the urban stratum and the rural stratum (30).

Compared to the situation prevailing in 1968, the size of an average household increased from 6.59 to 7.32 for a total number of 2,491,287 households. The distribution of households samples (8,208) between the urban stratum (5,508) and the rural stratum (2,700) with a high degree of representativeness of 1/190 for the former and 1/535 for the latter clearly introduces a large bias against the surveying of the rural population. The rural sample ought to have been of the order of 6,655

households to represent the overall population distribution between the rural and the urban strata. This is certainly a serious limitation of the 1980 survey (as such the 1980 HES was an essentially urban survey).

A- The food intake by stratum.

One of the immediate interests of the 1980 survey is the opportunity it gives to assess the food situation of households after well over a decade and particularly after a period during which Algeria entered into one of its most important post-colonial changes: the initiation of the intense industrial policy of capital accumulation.

Table IV. 1. 12: Level of food intake by stratum (U=kg/head/year) in 1980.

	Grand Algiers	Large	Average	Small	Urban	Villages	Countryside	Rural	Total
		metropolis		towns	towns	stratum	stratum		
Cereals*	143	162	170	188	165	204	197	198	185
Barley.	1.2	2	1.5	3.6	1.3	6	16.5	15	9
Bread	85	70	58	39	63	31	9	12	33
Roots & tuber	43	42	37	36	39	35	31	31	34
Pulses	20	19	19	13	18	16	15	14	16
Fresh	12	11	11	7	11	7	7	6	8
Dry	8	8	7	6	7	8	8	8	8
Vegetables	68	56	66	55	63	50	33	35	47
Fruits	47	31	39	35	39	25	21	22	29
Fresh	45	30	37	31	37	22	18	19	26
Dry	1.4	1.5	2	4	2	3	3	3	3
Meat									14
Sub total excl. bovine meat	20	1816		13	17	12	6	7	11
Ovine meat & offal	8	10	9	9	9	8	3	3	4
Poultry	8	5	4	3	5	3	3	3	4
Eggs	3	2	2	1	2	1	0.4	0.5	1
Other									0.4
Fish	3	4	3	2	3	2.5	0	0.3	1.6
Milk	79	56	43	33	51	29	45	43	47
Animal products inc. animal fat	105	81	65	50	74	45	52	51	64
Animal & veg. oils	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	15.29
Butter	3	3	3	2	3	1.6	1.2	1.2	2
Olive oil & Veg. oil									13.29
Sugar	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	15

Source: Ibid.

The overall picture of food intake remained unchanged particularly in view of the imbalance between the urban diet and the rural diet with the latter holding the highest cereal intakes and the lowest non-cereal intakes. The change which took place concerned both the level of intakes and the proportion between cereals and other food products. On

the whole, and except for cereals, the consumption of most products was much higher in 1980 (31). From 1968 to 1980, the average intake of cereals per head fell by 30% , i.e. from 266 kg to 185 kg. The drop was far greater for the rural stratum (about 40%) than for the urban stratum (20%). The exception remained with barley (92% drop for the urban population as compared with 82% for the rural population, but the rural population still consumes a much higher quantity than that of the urban population: 15 kg against 1 kg). The most consumed cereals remained hard wheat (in the form of semolina and paste) representing 78% of all grains as opposed to soft wheat (consumed mainly in the form of bakery bread) with 17% of total human consumption.

In all sections of the population, the contribution of barley in cereal intake has been reduced to a minimum: less than 1% in the urban centres and only 8% in rural areas (in 1968 the rural population was consuming 1/4 of its cereals in the form of barley). In absolute terms, the fall of cereal contribution in the average diet of the rural population was over three times that experienced by the urban population (respectively -125 kg and -40 kg). Such a drop is enormous and as such, ought to be handled with circumspection.

Though the rural population still consumes more hard wheat than its urban counterpart (78% against 63%), the contribution of soft wheat in the rural diet represents an increasing weight: 9% in 1968 against 14% in 1980, as such it expresses the result of the diffusion of an essentially urban pattern of consumption (until recently, the consumption of bakery bread was mainly a thing of urbanity which never penetrated the countryside).

On the whole Algeria consumes more bread than a decade ago: 33 kg in 1980 against 29 kg in 1968. The consumption of this product tends to be generalised, though with some considerable differences in intake levels between the two strata. The rural population consumed 12 kg of bread in 1980 (against 9 kg in 1968) and the urban population 62 kg against 51 kg in 1968 (32). In general, the main source of calorie supply (cereals) represents a lesser quantitative share in 1980 than in 1968. The question is whether

this drop has been nutritionally compensated by other products (33). With the exception of fruits (zero rate of growth), sugar (14 kg in 1968, 15 kg in 1980), and fish (1.3 kg in 1968 against 1.6 kg in 1980), most intakes were substantially increased: pulses (over 150% increase), vegetables (50% increase), meat (30% increase) and milk (40% increase). Therefore, with the drop of cereal consumption, such increases represent most of the alteration of the 1968 food intakes

As far as their distribution goes, such intake increases were not even for all strata.

Table IV. 1. 13: Incremental rate concerning the main food intakes by stratum (%) between 1968 and 1980.

	Urban stratum	Rural stratum
Potatoes	+30%	+82%
Pulses	+125	+133
Fruits	+34%	+5%
Animal products	+85%	+45%
Vegetables	+40%	+66%

Source: 1968 HES and 1980 HES

With the exception of animal products and fruits, the highest incremental intakes were mainly located within the rural stratum. But the significance of such increases, however, ought to be interpreted against the background of extremely uneven levels of intake between stratum, not to mention the effects of uneven income distribution within each stratum. As such, these rates of growth are of uneven significance. Above all, these rates fail to capture the evolution of the gap existing between the two populations. The following table allows precisely for the measurement of such a situation.

Table IV. 1. 14: Food gap trend between the urban population and the rural population:1968-1980
(U= kg/head/year).

	I Urban intake- Rural intake 1968	II Urban intake- Rural intake 1980	$[(II-I)/I] \cdot 100$ Degree of reduction of the gap 1968/80	$[(II-I)/I] \cdot 100$ Degree of extension of the gap 1968/80
Cereals	-92 kg	-33 kg	+64%	-
Bread	+42 kg	+51kg	-	+21%
Barley	-54 kg	-14 kg	+114%	-
Potatoes	+13 kg	+8 kg	+38%	-
Pulses	+2 kg	+4 kg	-	+100%
Vegetables	+24 kg	+28 kg	-	+16%
Fruit	+9 kg	+17 kg	-	+90%
Meat	+4 kg	+10 kg	-	+150%
Ovine meat	+4 kg	+6 kg	-	+50%
Poultry	+0.2 kg	+22 kg	+900%	
Eggs	+0.3 kg	+1.5 kg	-	+400%
Fish	+2 kg	+2.7 kg	-	+35%
Milk	+8 kg	+8 kg	0	0

Source: Ibid.

In relation to the urban population, and contrary to the previous figures, there has been a worsening of the terms of food intakes of the rural population for the majority of its products and particularly for animal products, pulses, vegetables and fruits.

The only reduction of food gap concerns barley (this reduction in nature is an artificial one since the urban population has literally given up the consumption of such a product; unless compensated by other products it is the reduction of cereals which is more worrying), cereals and potatoes , i.e. the cheapest food products of all.

What seems likely is that the impact of the industrial policy of development, if it allowed for a certain growth of incomes, has also provided the economic basis for an increased inequality between the two populations (34). What is more important, is that such a policy has tended to induce a structure of food intake more and more based on animal products but with a far smaller weight of cereals.

TableIV.1.15: Structure of food intakes by stratum between 1968 and 1980. (kg/year/head & %).

	Urban population				Rural population			
	1968	%	1980	%	1968	%	1980	%
Cereals	196	56%	165	41%	323	78%	198	56%
Roots & tuber	30	8%	39	10%	17	4%	31	9%
Vegetables	45	13%	63	16%	21	5%	35	10%
Fruits	29	8%	39	10%	21	5%	22	6%
Animal	39	11%	74	18%	27	6%	51	14%
Total	347	100	398	100	395	100	351	100

Source: Ibid.

With the exception of pulses, there is a striking similarity between the rural diet in 1980 and the urban diet of 1968. From both the quantitative and the qualitative point of view there is an identity, with a 10 year lag period, between the two models. Over a period of time the urban model consumption has tended to impose itself on the rural population (35), i.e. there has been a tendency of homogenisation of patterns of consumption. If, between 1968 and 1980, the urban model consolidated both its structure and its intake, the rural population, however, consolidated its diet at the expense of a regressive intake level. The urban population consumes more and better while the rural population consumes better but less.

Between 1968 and 1980 the urban population improved its diet by 51 kg of food products (all categories combined), while the rural population experienced a fall of 41 kg off its diet. One of the main factors explaining the gap between the level of intake between the urban population and the rural population remains the income aspect.

B- Income level and household distribution by stratum.

The following table shows, on the basis of a classification of households by level of expenditures, how income distribution (in itself a class produced distribution), produces social differentiation between groups according to their stratum distribution (36).

Table IV. 1. 16: Distribution of households by their level of expenditure in 1980.

Level of expenditure (AD)	Grand Algiers	The Metropolis	Average towns	Small towns	Villages	Countryside	Total	Cumulative total
<1,500	4.4	4.0	7.4	10.2	12.60	24.9	16.4	16.4
1,500/2,000.	7.5	9.9	10.2	14.6	18.30	21.1	16.4	32.8
2,000/2500.	9.2	11.6	9.7	15.0	14.20	14.6	13	45.8
2,500/3,000	11.2	14.3	9.8	12.0	13.70	9.0	10.3	56.1
3,000/3,500.	12.0	10.6	9.8	10.5	10.40	3.1	19.3	65.4
3,500/4,000.	10.0	8.3	9.1	6.9	6.70	5.6	7.0	72.4
4,000/4,500.	7.7	8.2	7.6	5.5	6.14	8.3	5.6	78.0
4,500/5,000.	7.6	6.8	7.1	5.5	5.00	3.4	5.0	83.0
5,000/5,500.	5.6	5.0	4.9	3.7	2.70	2.8	3.7	86.7
5,500/6,000.	4.5	4.5	5.0	2.0	2.00	1.0	2.4	89.0
6,000/6,500.	3.0	3.0	2.6	2.5	1.00	1.0	2.0	91.0
6,500/7,000.	2.0	2.0	3.0	2.0	1.00	1.0	2.0	93.0
7,000/7,500	1.5	2.0	2.0	2.02	2.00	2.0	1.0	94.2
>7,500	13	10.0	11.0	7.0	4.70	2.0	6.0	100
Total	100	100	100	100	100	100	100	

Source: 1980 Survey. Annex A. 4. Table 1.

The unequal aspect of income distribution prevails both within and between strata but the degree of inequality is by far the highest between strata (as seen in Part II, the terms of income distribution between the agricultural sector and the non-agricultural sector has tended to widen at the expense of the agricultural population). Thus if 1/4 of households in the three main metropolis are to be found within the three lowest income levels, i.e. below AD 2,500, the corresponding proportion in the countryside is to be found in the lowest income level below AD 1,500. Extended to the three lowest income levels, the proportion of households rises to 60%. Conversely, for the three highest income levels, the share of the three large metropolis is 15% of households while that for the countryside is only 4%. On the whole, the absolute majority of the population is concentrated within the lowest income scale. Around 50% of the population is living within the lowest income groups (37). The unequal distribution of households expenditures shows that per capita expenditure varies greatly from one stratum to another.

Table IV. 1. 17: Distribution of households expenditures by stratum in 1980.

	<u>Total expenditure</u>		<u>Population distribution</u>	<u>Per head expenditure</u>
	AD.million	%	%	AD
Algiers	7,151	13%	9%	4,261
The 3 metropolis	4,568	8%	6%	3,863
Average	13,847	24%	19%	3,986
Small	4,452	8%	7%	3,442
Urban stratum	30,000	53%	42%	3,928
Villages	4,128	7.2%	7%	3,038
Countryside	22,803	40%	51%	2,464
Rural stratum	27,000	47%	58%	2,543
Algeria	57,000	100	100	3,123

Source: Ibid., p. 68.

On average the urban population spends nearly twice as much on consumption than the rural population. Even when the intra-stratum distribution of income is not taken in to account, it is the countryside with 51% of the population (the majority of the population) which is by far the worse off with a 40% share of total expenditure. From the point of view of social categories, the gaps between per head expenditure with their own incidence on the weight of food spending are even wider .

Table IV.1.18: Distribution of social categories by level of per head total spending and food spending. 1980.

	<u>Food expenditures</u>		<u>Total expenditures</u>	
	AD	%	AD	%
Employees & liberal professions	2,288	52%	4,380	100
Self-employed	1,575	4%	2,912	100
Managers	2,463	51%	4,829	100
Clerks & qualified workers	1,986	55%	3,610	100
Skilled & unskilled workers	1,649	59%	2,798	100
Agricultural workers	1,426	70%	2,043	100
Other categories	1,781	57%	3,134	100
Total	1,758	56%	3,123	100

Source: Ibid.

For the lowest expenditure per head (AD 2,043), the food budget is the highest: 70%. Conversely, managers with the highest expenditure level (AD 4,829), allocate only 51% of their resources to the food budget. For all social categories, representing the

total population (38), the weight of food represents 56% in the total budget (39). Between 1968 and 1980 the weight of food has not decreased in the total household budget. On average food is costing more for all social groups (in 1968 food budgets represented 54%). If the drop in the food budget was to be used as an indicator of economic progress and development, then, from that standpoint, the Algerian situation is far from conforming to such a qualitative change.

IV. The comparative results of HESs and the FAO food balance sheets (FBC).

FBS represent a second source of knowledge about the food situation of Algeria. Although HESs are by far the most privileged tool of food investigation, it is, nonetheless, worth attempting a comparative study of the two findings. The contrast between the two main sources is best assessed as follows.

Table IV. 1. 19: Comparative findings of FBSs and HESs (U=kg/head/year).

	FBS 19667	HES 1968	FBS 1978	HES 1980	FBS 1984
Cereals	106.0	208.0	150.0	185/157*	199/163
Barley	13.0	41.0	18.0	9	15.0
Roots & tuber	12.0	22.0	27.0	34	29.0
Pulses (dry)	2.0	3.0	5.0	8	5.0
Vegetables	21.0	37.0	22.0	55	38.0
Fruits	47.0	29.0	56.0	29	52.0
Meat	9.0	11.0	9.0	14	11.0
Milk	56.0	34.0	44.0	47	80.0
Fish	1.6	1.3	2.2	1.6	2.1
Veg. oils & fats	8.0	10.0	11.0	15	15.0
-Oil	7.0	9.0	8.0	13	12.0
-Fat, butter	1.0	1.0	3.0	2	3.0

Source: FBS 1966/70: FAO/UNPD. P. 132. FBS 1978: Food Balance Sheets. FAO. Rome 1980. p .79.
FBS 1984 Document personally provided by the FAO.

* 185 in terms of grains; 157 in terms of flour/semolina. The value of cereals for 1966, 1968 and 1978 are all expressed in the form of flour/semolina equivalent (40).

Discrepancies exist and they are particularly important for cereals. The 1967 FBS and the 1968 survey display a gap of the order of 100 kg/person/year. This gap is in fact the highest of all. Its existence makes us realise that our source of knowledge about the food situation of Algeria is relative. With the exception of fruit and vegetables, the 1968 figures are far superior to those of FBSs. From 1978 onwards, however, the gaps between FBSs and HESs are definitely smaller with the sole exception of fruits for

which both surveys display a constant intake (29 kg). As with the 1968 survey, the 1980 survey also shows greater levels of intakes than FBSs. For animal fats and vegetables, a convergence of intake similarities emerges. This similarity exists as well for fish but with a constant overestimation on the side of FBSs figures. For barley the contrast between the level of intakes is constantly important, but both sources give a downward intake trend. The 1968 figure seems however to be exaggerated. Given other findings (41), the figure of 41 kg/person/year could well include animal feed.

For other categories of cereals (mainly wheat), the levels of intakes show a definite convergence. On the whole and with the exception of fruit, HESs tend to display higher intakes than FBSs. There are two reasons for such a situation: the question of self-consumption on the one hand and the overestimation of HESs themselves on the other. Generally speaking FBSs fail to assess the non-marketable production and as such their intakes always fall short of the share of production which is self-consumed. In an economy which is not fully dominated by commodity relations, and such was the Algerian situation in 1968 (42), part of the production is retained from the market.

Table IV. 1. 20: Rates of self-consumption (% share of intake/person/year).

	HES 1968	F.E.S 1980
Cereals	19%	4%
Roots & tuber	11%	8%
Vegetables	11%	13%
Fruits	12%	N.A
Milk	44%	40%
Meat & offal	14%	8%
Pulses	40%	5%

Source: 1968 and 1980 HES

If FBSs were to be adjusted using the above rates of self-consumption, the extent of the gap will become as follows.

Table IV. 1. 21: Adjusted FBSs (kg/person/year).

	Adjusted FBS (1966/70) (1)	HES 1968 (2)	Gap (2) - (1)	Adjusted 1978 FBS (3)	1980 HES (4)	Gap (4) - (3)
Cereals	146	208	+62	156	157	+1
Roots & tuber	15	22	+7	30	34	+4
Pulses (dry)	4	3	-1	5.4	8	+2.6
Vegetables	25	37	+12	29	55	+26
Fruits	50	29	-21	56	29	-27
Meat	11	11	10	10	14	+4
Milk	71	34	-37	63	47	-16

Source: Ibid.

The introduction of self-consumption has considerably reduced the gap between FBSs and HESs but on the whole FBSs remain constantly overestimated for milk and fruit, while HESs are for all other products and particularly vegetables. These discrepancies are obvious inadequacies pertaining to both sources concerning the magnitude of food intakes. But whatever the differences between the two sources, no analysis of the food situation is complete and satisfactory if, and this applies more for developing countries, it is not accompanied by the testing of the findings. This reserve is dictated by the following consideration: the degree of accuracy of either HES and/or FBS cannot be taken for granted. The qualitative appreciation from the nutritional and medical standpoint of the level of intake and its structure is lacking. In fact, for Algeria this area is still relatively untouched by research in general. The absence of less global and more specific surveys about socially identifiable groups particularly agricultural workers, industrial workers, households living in shanty towns which make up a very important fraction of the urban population, and the unemployed, etc.

The elements of ponderation about both surveys can be weighted by the findings of a W.H.O expert (43) and a group of researchers (44) on the state of malnutrition particularly among children. The findings are briefly summarised by M.Autrey (45) in six points: "lags of growth (up to 3 kg) among children of the age group 4 and 5, relative frequency of calorie and protein malnutrition among children, frequency of rickets, high frequency of avitaminosis (A and B2), existence of zones of goitrous endemic disease, and frequency of anemia with both mother and child".

Generally speaking it is only under the condition of a regular observation of malnutrition and its effects on child development, on the rate of child mortality, on the health of women and particularly child bearing women, etc., that it becomes possible to complete the findings related to HESs and therefore assess with relative accuracy and significance the sense of evolution of the food situation of the population in its concrete meaning: the improvement of basic conditions of existence.

CONCLUSION.

The analysis of the two main HESs revealed the essential characteristics of the Algerian food situation both in its structure and in its intake level. If in 1968 it appeared rich in calories because of the weight of cereals and poor in proteins (particularly animal proteins), in the 1980s it emerged as a more balanced diet with relatively less cereals (particularly hard wheat for the rural population) and more non-cereal products especially pulses and animal products.

This qualitative and quantitative food shift was made possible by the new economic conditions created by the industrial Algerian policy of development: a massive injection of incomes (unequal in their distribution) which took the form of an overall increased purchasing power for the population unmatched by any corresponding increase in agricultural production and agricultural productivity. More specifically the homogenisation of food consumption was achieved through two main factors: the doubling of the urban population in a relatively short period (in 1966 30% of the total population - 3.6 million - was living in urban areas while in 1980 the rate of urbanisation of the population went up to 42% with 7.6 million), and the increasing availability of food products of imported origin (46). The generalisation of the food model of consumption that accompanied the development and extension of wage earning relations has not however resulted in a reduction in the gap between the diet of the urban population and that of the rural population (the management of the food content directly associated with the generalisation of capitalist relations of production, was more evident in urban areas which are the locus of capital accumulation than in rural areas where the diffusion of capitalist relations of production is relatively attenuated by the survival of simple commodity production and lower wage levels). The imbalance between the two populations, in terms of food intakes, has been a constancy of the Algerian food situation. As a matter of fact this imbalance has been steadily increasing. In the late 1960s the imbalance was expressed in the form of a rural diet heavily based on cereals on the one hand and an urban diet relatively balanced in its composition on

the other. By the 1980s, if the composition of the two diets showed similarities in their structure, the rural diet, unlike the urban diet, underwent a reduction in the total food consumed. The distribution of expenditure per head showed in turn the origin of the unequal food distribution, both between the urban and the rural population, as well as between social groups.

In the last analysis, it is at the level of these economic conditions that the question of the conditions of access to food rises. As such, the food question is directly linked to the nature of the policy of development. In this respect it is the oil rent based industrial policy of Algeria which is at the root of all changes that affected the conditions of reproduction of the labour force particularly in its food aspect. The significance of the increasing food deficit of Algeria as well as the increasing cost of food acquisition by those social groups where dominate wage earners, and low income groups in general, are only the correlate of such a strategy of accumulation.

It is therefore in the light of such a strategy that we fully devote our attention to the study of the regulatory aspect of state food policy proper.

NOTES

1-"The use of products is determined by social conditions in which consumers find themselves" Marx, Karl Misère de la philosophie. Editions Sociales. Paris. 1972. p. 72.

2-Jean Pierre Terail. The historical and social nature of needs in Capitalism, consumption and needs. Preticeil and Terail. Basil Blackwell. Oxford. 1985. p. 39.

3-A good account of a critique of FBS limitations is to be found in Food and poverty, Appendix 1 by Sinha, Radha. Croom Helm London. 1976.

4-K. Griffin and Khan, A. R Poverty in the Third World: Ugly facts and Fancy models. World Development, 1978. Volume. 6, p. 303. Pergamon Press.

The channeling of food goods and for that matter of any type of commodity is determined in the last analysis by the places occupied by the different social groups in the relations of production, relations which determine the way the social product is primarily distributed between the representatives of labour and capital. It is this social structural relation between capital and labour which determines the degree of skewdness of income distribution and therefore that of food production or food supply.

5-The justification of such a choice is commanded by two important considerations. Both surveys are concerned with the study of food of the total population, and they are based on a similar methodology.

6-See Appendix AIV.1, AIV2, and AIV 3.

7-The percentages represent corresponding households proportions.

8-The survey excluded from its scope the nomadic population (particularly important in the Southern part of Algeria), foreign households temporarily living Algeria at the time of the survey, persons living on their own and all collective households in general (hospitals, boarding schools and the army). Most of our references on the 1968 survey are based on the work of M. Autrey ex-Director of the Nutritional Division of the F.A.O and a leading expert on nutritional and food issues for the Maghreb countries. Algérie: Evaluation de la Situation Alimentaire (Analyse Nutritionnelle de l'Enquête Nationale

sur la Consommation et les Budgets des Ménages). FAO. Rome. 1978.

9-Due to the climatic heat of the Sahara desert, the Southern population like many populations living in excessive heat, rely on a great consumption of tea and particularly sweet tea, in order to fight the thirst of a dried climate. Apart from being the product of a climatic constraint, the consumption of tea is above all associated with a social ritual regarded as the cultural expression proper to the Southern population.

10-The determinants of the model of reference are both social and cultural in their expression as well as economic in their basis (level of income, nature of the income, etc.).

11-See Appendix AIV.4, AIV.5, and AIV.6.

12-It goes without saying that the notion of farmers being too vague and general since as it can include a capitalist farmers using the most sophisticated industrial inputs as well as a marginal peasant working his marginal plot of land with rudimentary tools, the above notion of "farmers" can only refer to the pauperised fraction of farmers. The survey show that 75% of farmers households were to be found in the lowest income group (Ibid., P. 142).

13-The evaluation of intakes discrepancies is based on the UNPD/FAO document pp 179 - 189 (tables A3.1, AS.2, A3.3, A3.4, A3.5 and A3.6). The discrepancy rates have been computed on a stratum basis. As such this method does not always incorporate certain SPCs in certain strata. The overall presentation for Algeria as a whole does however contain all categories. When the presentation of intakes by stratum fail to incorporate certain SPCs for lack of sufficient number (below 25 households), we refer therefore to the overall table. This is particularly the case for the category of top executives, liberal professions, self-employed, etc. The method of presentation by stratum has been preferred in order to avoid computing the discrepancy rates on the basis of average values at national level.

14-All cereals figures relate to the value of cereals expressed in flour/semolina. As such they are lower than figures expressed in terms of grains.

15-If one brings in the nutritional aspect of food products, it appears here again that for both pulses and vegetable oil, the high social category derives more nutrients from

these two products than the low category. The case of sugar is different as it represents the best sample of an empty calorie product.

16-In actual fact the reference to the ideal prototype goes well beyond the simple nutritional reference as it implies a reference to an ideal environment devoid of those elements, such as ineffective demand, lack of access to food, poor sanitation, etc., which in the real world stand in the way of human achievement. What the man and the woman of reference are about is that the notion of development can hardly be restricted to one or another aspect of improvement but rather to its full dimension , i.e. embracing all its essential aspects.

17-R. Passmore, B.M. Nicol and M. Nararayana Rao Handbook on human nutritional requirement. FAO and WHO Rome 1984. P. 2

18-But tacking into effect the structure of the Algerian population.

19- See Appendix AIV.7.

20-Le monde, 22nd, April, 1987, article by C. B. P. 20.

21-See Appendix AIV.8.

22-On this point cf. the interesting article by Professor Leonard Joy Food and nutritional planning Journal of Agricultural Economics. Vol. 24. 1973 pp 165-192.

This point has far reaching implications depending on the type of priority and the type of development that the policy makers are to privilege: a priority to increase the calorie requirement of the population or the protein requirement ?

23-If income is the intermediate variable between needs and food production, one clearly sees that a situation whereby there is an equilibrium between food supply and food demand does not necessarily imply that food needs are being met by food consumption. Or as put by D.Badillo "the neo-classical principle of a confrontation between supply and demand on a market fails to explain the mechanisms which led to situation of malnutrition or even suggest alternatives ". Ibid. cit. P. 146.

24-Incidentally it is among the well off social groups that we find most the preservation of 'traditional' food habits, but only those associated with the food habits of the dominant social groups themselves.

25-It is worth mentioning that it is only at a higher level of income that the same

proportions of food expenditure are to be observed for both strata. Two elements on our mind seem to explain such a phenomenon. At a higher level of income there is a homogenisation of the food model precisely because the income constraint does not any more represent a barrier. The situation is different for the lower income group. Here our assumption is that incomes being lower in the rural areas, it is very likely that, for the same level of food spending, the rural population "spends" more on food because of the integration of self-consumption, a well generalised practice.

26-Food price system will be discussed in the next chapter.

27-The 1968 survey estimated the following percentages of self-consumption in the average intake: 19.5% for cereals, 11% for roots and tuber, 40% for pulses, 11% for vegetables and 14% for meat.

28-Cf. C. and Ch. Grignon. *Op. Cit.*, for the case of modern French peasantry.

29-Conversely, the urban population, because geographically located at the heart of the food market, develops a different attitude towards food consumption which in this case is largely determined by the food model of reference on the one hand and the level of income on the other. This goes mainly for those categories, i.e. mainly the low income category, who rely heavily on the subsidised food market. Cf next chapter.

30-See Appendix AIV.9.

31-The increment in food intake was the direct result of the overall increase in the purchasing power of the population as a result of the initiated global industrial policy.

32-See Appendix AIV.10.

33-This question is particularly acute for the rural population which in 1980 experienced a cereal intake (198 kg) close to the cereal intake of the urban population in 1968. (206 kg). This question is also relevant for the urban population with the lowest income level.

34-This inequality could not have been achieved without an inequality between all other groups.

35-The consequences of the generalisation of such a model will be studied in a separate chapter at a later stage.

36-The unequal distribution of income of the urban population clearly confirms that the industrial Algerian policy has been mainly an urban based industrialisation.

37-It is very likely that it is this fraction of the population that poverty is to be found. It is in this category that we find 70% of agricultural workers, 50% of self-employed and 47% of qualified and unqualified workers (the regrouping of these last two categories has been made unavoidable by the presentation adopted by the survey).

38-The percentage weight of all social categories is as follows: employees and liberal professions: 2.4%, self-employed: 25.3%, managers:5.5%, clerks and qualified workers:19.4%, specialised workers and unskilled workers: 18%, agricultural workers: 10%, other categories:19.4%.

39-For the social categories with the lowest income levels, wages can be assimilated to subsistence wages.

40-The 1984 FBS figure are however expressed in grains. The 1968 figure expressing the level of cereals in flour/semolina is obtained using the same extraction factor used in the HES of 1980 (85%). The use of an identical extraction obeys considerations pertaining to the practical possibility of comparing the flour/semolina content of cereal intake expressed in grains and referring very probably to two different structures of cereals consumption patterns.

41-The 1967 survey conducted by M.A.R.A to assess the food situation of farmers in the private agricultural sector showed a level of barley intake of 21 kg. Even if this intake reflects a situation 8 years after the 1968 survey, it tend however to support the fact that the 1968 survey over-estimated the human consumption of barley and as a consequence the level of cereals consumption in general.

42-The gap between the finding of the 1978 FBS and the HES being smaller than those of the 1960s tend to suggest *a fortiori* that Algeria was more dominated by commodity relation in 1980 than at the time of the 1968 survey. In other words the share of self-consumption is very likely to have fallen since 1968.

But self-consumption as a part of a food model of consumption can also be the expression of the resistance of a style of life, in its food aspect, against an emerging dominant urban food model conveyed by the market. This point has been studied for the

French peasantry by C. & Ch. Grignon Styles d'alimentation et goûts populaire. Revue Française de Sociologie. V21, 1980.

43-A. Raoult Enquete sur l' état de nutrition des enfants Algériens, Paris, Medecine et Dietetique. N° 3, 1974. Quoted by Autrey, M. P. 55

44-Grangaud & collaborateurs. Epiddemologie de la malnutrition de l'enfant Algérien d'age prescolaire. Rapport sur la malnutrition de l'enfant Algérien. 5ème Congres Medical Maghrebin. Alger, Mai 1975. Quoted by Autrey, M.

45-Ibid. P. 80.

46-The combined effects of these factors bear a direct relation to the reduction of self-consumption which is particularly dominant in the rural areas.

CHAPTER II

THE ALGERIAN FOOD POLICY AND ITS MANAGEMENT:

THE REGULATION OF THE VALUE OF LABOUR POWER.

Introduction.

The state of the Algerian food situation is structurally dominated by food imports. Throughout the years and particularly since the late 1960s, the management of this constraint has become *de facto* the expression and the embodiment of the state food policy proper. Far from being a mere management of the constraint resulting from an inelastic agricultural production, the state food policy is also and above all a policy of management of capitalist development itself. As such this policy is impregnated with the implications imposed by the adoption of an overall urban based industrial policy of development: to meet at the lowest possible cost the reproduction of the labour force accompanying the industrialisation process in particular and capital accumulation at large (perceived from that viewpoint, the state food policy can be regarded as the policy whose objective is the management of the wage-earning constraint). If the state food policy in question is in essence a policy which "resolves" the food constraint through an increasing reliance on the international market, from the evidence this should be seen as the case only as a result of the inability of the domestic agricultural sector to meet the wage constraint in the first place. The development of agriculture on the basis of the penetration of capital has not yet resulted in raising a level of agricultural surplus large enough to meet the reproduction of labour power in a form that will not compete with the formation of the stock of capital exclusively financed from oil resources raised on the international market. What however characterises the state food policy - which is above all a policy of management of the value of labour power - is not only a mere equalisation of food demand and food supply obtained by food imports that oil rent is able

to finance, but also the provision of a quantum of wage goods which can guarantee the reproduction of labour power at a level of subsistence nutritionally defined.

In what follows it is intended to examine more closely the state food policy in its manifestation and how it is operated on both markets (national and international), in order to assess on the one hand its mode of contribution to the relief of the internal food constraint and on the other to determine its impact on the regulation of the value of labour power.

I. The characteristics of the state food policy.

The scope of intervention of the state is a two level intervention. Firstly, an intervention on the world food market. At this level the state is the exclusive operator and as such its command over the modalities of imports is absolute. The overt objective of state board operators is the bridging of the gap between food demand and domestic supply. Secondly, an intervention on the domestic market. Here the state monopoly is counterbalanced by a relatively autonomous private sector in terms of crop selection and choice, the existence of a parallel and independent distribution network, a free price system, etc. The logic of intervention of the state on the domestic market is dictated by the necessity of meeting, out of imports and the state controlled domestic agricultural surplus, food demand at fix price.

A-The international intervention of the state.

The immediate objective of state intervention on the international market conforms to the necessity of meeting the gap existing between domestic food demand and supply. This gap concerns all basic food products: cereals, sugar, vegetable oil and milk, i.e. the main sources of calorie and protein intake. As a percentage of apparent food consumption, imports have represented an increasing proportion.

Table IV. 2. 1:% contribution of food imports to apparent food consumption
[imports/(domestic supply +imports)].

	1966	1970	1974	1978	1981
Cereals	41%	14%	56%	65%	61%
Sugar	94%	93%	85%	78%	76%
Vegetable oil	64%	64%	54%	63%	61%
Milk	-	30%	-	-	-

Source: Séries Statistiques and Yearbook of International Trade Statistics.

The increase of food imports over the years has not taken place without a certain diversification of products. The diversification concerns mainly two products: cereals and animal products. From the 1960s onwards both the quantity and the quality of imported cereals increased. The diversification went from wheat (in 1958), to wheat, flour and cereal preparation (in 1968), and to wheat, barley, maize, wheat flour, meal, wheat groats, meal or groats (other than wheat), etc. (in 1978). In the category "animal products" the most significant qualitative change concerns meat. If up to the mid 1970s imports consisted exclusively of "live animals", in 1974 for the first time meat was directly imported for immediate consumption. Under the pressure of an increasing domestic demand and the generalisation of animal products consumption, eggs became an import product in 1974 for the first time. Given the inaccessible price of red meat for average and particularly low income groups (at present prevailing prices, around AD 130/kg, the purchasing power of the minimum nominal wage rate represents the equivalent of less than 10 kg per month), imports also provided for the production of poultry in the form of a supply of feed (1). Poultry farming is one of the instances where imports provided for the provision of all required inputs, feed and machinery. Between 1964 and 1981 the volume of imports of animal products (including animal oil and fat and excluding poultry production catered for by feed imports) increased on average by more than 25%. This was by far the most important increase of all categories of food products.

B-The state intervention on the domestic market.

Based on the requirement of supplying the domestic market at the lowest price possible,

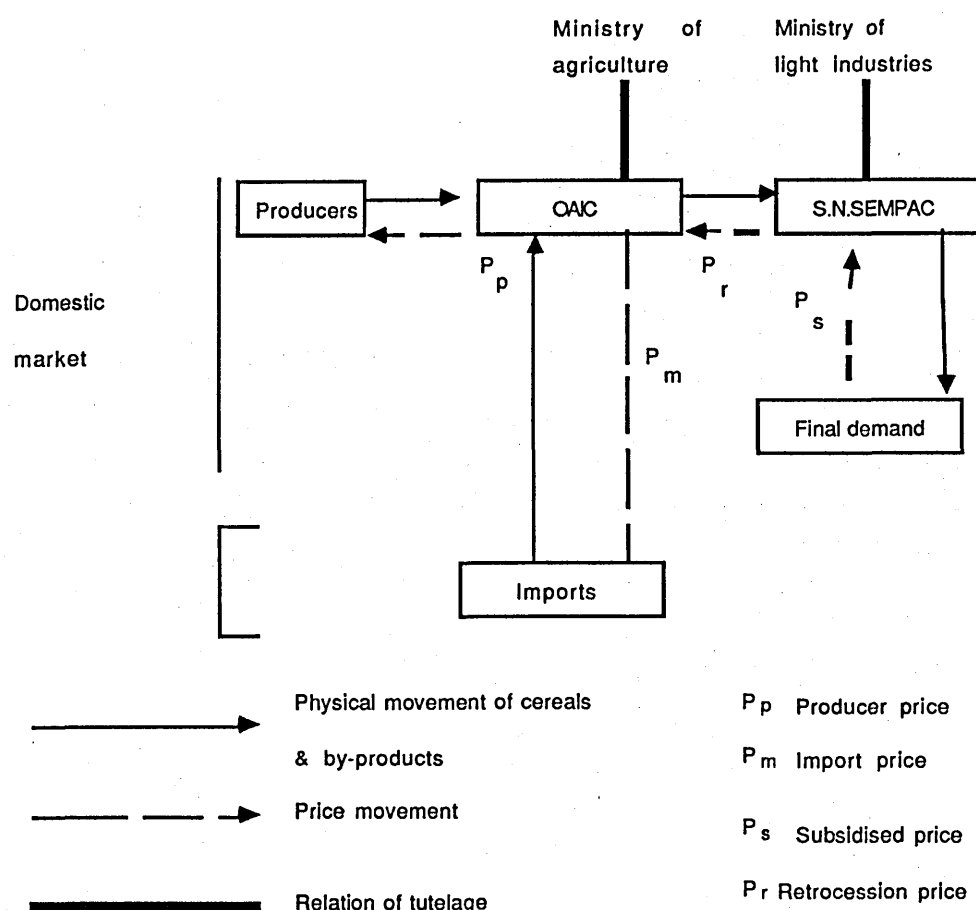
the state policy of intervention relied on four direct methods. At the level of imports, the use of an overvalued currency, and the suppression of custom duties on imports (particularly since 1974), provided for the *de facto* conditions of cheap food imports. At the domestic level, the generalisation of subsidies and producer price control further completed the policy of food price control. The incorporation of such measures into specific policy goals finds its embodiment in the mode of management of the essential components of the daily diet of the population.

a. The cereal policy.

Given the overwhelming weight of cereals in the daily diet of the Algerian population, the cereal policy represents one of the main focuses of the state food policy of intervention. Broadly speaking this policy involves three main stages of price control: a *producer price* at the collecting stage or simply an import price where imports are concerned, a "*retrocession*" price (i.e. the price at which the processing industry catering for final demand pays the state supplying board, or the internal price between the importing board and the processing industry) at the processing stage, and a *subsidised price* at the consumer level.

The collecting stage function is devoted to the state cereal board OAIC (a colonial creation of the 1930s). The role of OAIC is to "guarantee the producers an outlet for their products at a remunerative price" (2). The state board acts therefore as a collector on the domestic market, but also as the exclusive importer on the international market. The downward stream function of OAIC is to supply the state owned enterprise SN-SEMPAC (National Enterprise for Semolina, Milling, Pasta and Couscous) with the necessary cereal inputs required to meet domestic final demand for cereal products at a fixed price throughout all Algeria. The following diagram summarises the working of the cereal network from imports to the final demand.

Figure 1: Overall marketing network for cereals.



The share of domestic production collected by OAIC has always fluctuated according to the fluctuation of total production. During the last two decades this share has tended to be stabilised at about 1/2 the domestic production.

Table IV. 2. 2: Domestic cereal production accruing to the cereal board (U=million tons).

	1951-55	1957-61	1961-64	1965-67	1968-71	1972-74	1975-77
Domestic wheat production	1.10	1.30	1.40	1.10	1.40	1.30	1.40
Share acquired by OAIC	0.67	0.74	0.68	0.49	0.74	0.70	0.79
% share of domestic production sold to the board	59%	56%	48%	43%	52%	51%	55%

Source: I. Molina, Ibid, p. 206.to the board

Over three decades the cereal board captured around an average of 700,000 tons per year (the magnitude of OAIC collection bears a direct relation to the level of cereal

imports). A number of objective factors explain the inability of OAIC to capture a greater share of domestic cereal production. On the issue of remunerative prices, production prices did not provide any form of incentive: from well before 1960 and until 1974, the price at which the cereal board paid cereal producers (3) did not undergo any significant increase (it is worth mentioning that the significance of the cereal price freeze during colonisation - especially when domestic subsistence farming is concerned - did not proceed from the same rationale as that of the post colonial period: while the policy of cereal prices before 1962 obeyed the objective of the maximum extraction of surplus produce from peasant producers through a price squeeze operated at the advantage of the colonist export marketing boards, the function of fixed cereal prices in post colonial Algeria was - in addition to the price squeeze born by peasant producers - more directly geared towards the domestic valorisation of capital accumulation through the regulation of its subjective condition)

Though in principle producers are organised in cooperatives which are in charge of the marketing side of production, SAP or CCRA (the *coopératives de commercialisation de la révolution agraire*: marketing cooperative of the agricultural revolution), acts as a mere appendix to the central board OAIC and as such they operate as simple collecting bodies. Moreover the determination of prices is fixed outside the intervention of the producers and the management of the marketing function is entirely within the hands of the Ministry of Agriculture MARA (as far as the cereal policy is concerned, and though the degree of freedom offered to private producers is much greater than that of the SMS, it is the entire agricultural sector of cereals which falls under the state policy of administered prices).

The possibility for most producers to increase their income only occurred after 1974. Such a decision was also accompanied by a temporary freeze in the prices of certain farm machinery and fertilisers. But as S. Bedrani, the expert on Algerian agriculture, rightly pointed out, "such measures [concerning the price freeze of certain industrial intermediate goods] came late as the prices of such inputs were frozen at an already

high level on the one hand, and were partial since they did not apply to many other agricultural intermediate consumption [seeds, lorries, trailers, irrigation equipment, green-houses, pesticides, fungicides, herbicides, etc.]" (4). This passive policy which has been systematically pursued by the cereal board, which acted more as a simple centres of collection at disincentive production prices, explains to a certain extent the relative stagnation of the share of domestic production supplied to the processing industry.

The policy of OAIC vis-à-vis domestic producers contrasts a great deal with its import strategy. *De facto*, imports offer many direct advantages to the cereal board. Firstly there is a practical advantage. Here, the possibility of acquiring whatever quantity of cereals was needed on the international market contrasts with the uncertainty linked with domestic crop fluctuations as well as with the limited quantities collected in relation to the needs of the processing industry, and the existence of stocking facilities at harbour points located in urban areas endowed with the necessary infrastructure contrasts with the scattered collecting points in rural areas (5), the proximity of cereal processing industries in the urban areas also stimulated the dependence of the board on cereal imports, etc. On the financial side OAIC gains more from the international market. If one looks at the cereal network from the supply side of the processing industry, import prices (as translated by an overvalued rate of exchange) are systematically lower than both producers' prices and particularly retrocession prices. With the exception of a few years, OAIC was paying domestic producers at a much higher level than that of world prices (6). Except when international prices rocketed during the years 1974-76, the cereal board tended to benefit on a whole from its import policy as is evidenced by the following table:

Table IV. 2. 3: Trend in cereal prices: 1964-1977. (AD/ton).

Year	Import price	Retrocession price	Production price
1964	342	N.A	470
1965	398	N.A	470
1966	381	N.A	470
1967	378	N.A	470
1968	348	N.A	470
1969	430	475	500
1970	380	475	500
1971	356	475	500
1972	254	575	500
1973	420	580	500
1974	475	N.A	500
1975	970	N.A	625
1976	960	N.A	725
1977	730	N.A	875

Source: U.N Yearbook of International Trade Statistics for import prices(average prices are import C.I.F).H. Delorme, op., cit., p. 12 for retrocession prices and production prices (production prices for the period 1964-68 are our own estimate).

Between 1969 and 1971 import prices were decreasing while internal processing prices (retrocession prices) remained constant. Between 1971-72, while import prices underwent a further drop, retrocession prices were increased. The sudden increase in import prices between 1972 and 1973 was not enough to alter the positive gap with retrocession prices. Up to that date, and as far as OAIC was concerned, "the stabilisation of domestic prices did not cost anything and even allowed for substantial profits" (7). The subsequent sharp rise in international prices substantially altered the balance between relative prices. Conceived in a favourable context of low international prices, the state food policy based on price control, soon became more and more dependent on increased subsidies (on average, AD 935 million/year for the period 1974-81).

At the processing stage too, the use of subsidies becomes an unavoidable consequence. As the main processing board SN-SEMPAC is under obligation to meet at fixed prices the demand for all finished cereal products (8) throughout the Algerian territory (in 1982, SN-SEMPAC owned 764 warehouses distributed throughout the territory and as such was literally present in excess of 1 warehouse per commune; during that year Algeria was administratively subdivided into 704 communes. The effect of such an

intervention is significant in many ways. Above all it reflects the ability of the state to affect and influence the profile of the food diet of the population through a complete control of the market for cereal by products. The distribution of subsidies for the three major output components was as follows.

Table IV. 2. 4: Price subsidies at consumer level (U= AD Millions).

Subsidised products	1974	1975	1976	1977	1978	1979	1980	1981
Flour	-	67	115	37	19	-	113}	
Semolina	-	166	66	143	132	-	309}	435*
Pate	-	17	-	-	-	-	-}	
Total	-	250	181	180	151	-	422	435

Source: H. Haddouche "Situation des produits à prix fixes (1968-1981)" in Debats et Critiques. N° 7. INEAP. Algiers. 1983. p. 81 (* refers to the value of the tree items).

From 1974 to 1978, price subsidies tended to be constant with an average of AD 150 million/year, and between 1979 and 1980 they doubled with about AD 300 million/year. The distribution of overall cereal subsidies revealed a high concentration at the pre-processing level (OAIC absorbed on average well over 3/4 of subsidies).

Table IV. 2. 5: Distribution of total cereal subsidies: 1974-81 (U= AD million).

	1974	1975	1976	1977	1978	1979	1980	1981
At OAIC level	1,356	1,188	684	661	650	460	1,077	1,410
At SN-SEMPAC	-	250	181	180	151	-	422	435
Total	1,356	1,438	865	841	801	460	1,499	1,845

Source: Ibid.

The comparative relative constancy of subsidies at the processing stage tends to suggest a lesser variability of retrocession prices (9), compared to the cumulative increase of import prices and producer prices after 1973. In other words OAIC serves as a price absorbing screen so that the retrocession price mechanism resulting from the fluctuation of producer and import prices, does not operate on the downward processing industries which therefore tend to enjoy relatively stable input prices (10). But independently of the distribution of subsidies between the different bodies involved, and

the magnitude of subsidies at different levels of intervention, any policy of price subsidy is based on the absorption of the effects of price fluctuations at input level (11). In terms of results, the state policy of subsidies has been able to meet, at relatively low prices, the requirement of the final demand for cereal products.

Table IV. 2. 6: Retail price index for cereal products: 1969-83. (1971=100).

	1969	1971	1977	1978	1980	1983	Average yearly increase 1969-83
Bread	95	100	100	122	185	182	6 %
Paste	127	100	106	119	144	141	3 %
Semolina	N.A	100	104	128	162	176	5 %
Couscous	99	100	106	119	154	142	3 %

Source: "L'Algérie en quelques chiffres". Direction des statistiques. Alger. 1970-1984.

The above prices, which are retail prices (including in principal the profit margin of sellers), i.e. prices higher than those of the processing industry itself, did not changed significantly until 1978. The post-1978 period opened up an era of comparatively important increases (12) affecting the majority of products. The occurrence of such increases, far from calling into question the existence of the price subsidy policy, can only be seen as the unavoidable revision of consumer price fixing policy. Such an upward price revision took place against the background of an overall increase in the purchasing power of the population. As a result of a massive income injection (13) following the launching of the Algerian industrialisation programme, the demand for cereal products underwent an increase which by far exceeded that of population growth itself (between 1969 and 1981 the demand for semolina increased by 8.7%/year, that of flour by 5% and that of pasta by 7% (14). Such a demand increase bears the scars of the peculiarities of the Algerian food market. In many instances, it expresses a *de facto* forced demand (15) by low income groups for a relatively abundant and cheap product. The transfer of such a demand on alternative products is not materially possible because of the combined effects of a regular scarcity (as is the case of pulses) and the prohibitive level of prices at which certain products are available (as is the case of vegetables, fruit and meat). This clearly shows that unless the supply of other food products increases at moderate prices, the restrictive use of a price subsidy policy, in

terms of the scope of the range of products concerned by the policy of intervention (in the case of Algeria, mainly cereals and its by-products), is bound to increase cost subsidies by over-concentrating the demand on the cheapest subsidised products. The scope of consumer price subsidies is not however restricted to cereal products alone. To a lesser extent and with great variability, animal products, vegetable oil, sugar and coffee represent the second category of subsidised products.

b. The scope of non-cereal subsidised products.

1. Animal products.

The main import is powdered milk which represents between 60 and 70% of the total animal imports. In the category of meat imports, red meat import for direct consumption, initiated since 1974, still does not represent more than 6% of total animal imports. The diversification of animal imports centres mainly on butter and eggs both of which represent over 30% of total animal imports (16).

2. Vegetable products.

In the category of vegetable products, and up to the late 1960s, tubers represented the main vegetable imports. A major diversification was introduced in the early 1970s in the form of a drastic increase in dry pulse imports: 6,000 tons in 1971 (6% of total vegetable imports), 112,000 tons in 1979 (36% of total vegetable imports), giving an average rate of increase of 220%/annum. This major shift in the structure of vegetable imports corresponds with requirement of meeting the demand of low income groups for protein products (17). The increased reliance on imports denotes the extent of the deficit of domestic production itself but also the sign that the consumption of a product for which there is clearly a tendency for over-consumption as a result of the permanent imbalance introduced between the price of vegetables and animal proteins or, in other words, the imbalance between the formation of fixed/subsidised products prices on the state controlled market and free determined prices for animal products on the private market.

3. Vegetable oil and fat.

Up to 1974, the imports of vegetable oil and fat remained constant at around 100,000 tons/year. From 1975 onwards the level rocketed to an average of 300,000 tons/year. Such an increase was the expression of the contradictory result of a shift in the oil industry based on the decision to substitute seed imports with domestic production based mainly on sunflower and soya beans. The initiation of such a policy, because it was not based on the maturation of the main objective (the increased domestic production of seeds), eventually led to an increase in seed imports as well as in total vegetable oil. With the early implementation of the new policy, the import of seeds fell from 71% (66,000 tons) in 1964, to 46% (58,000 tons) in 1974 and to 19% (76,000 tons) in 1981. While the induced domestic production was not forthcoming, fixed vegetable oil imports increased: 27,000 tons in 1964 (29% of total imports of vegetable oil and fat), 84,000 tons in 1974 (59% of total imports of vegetable oil and fat), and 390,000 tons in 1984 or the equivalent of 80% of the total imports of vegetable oil and fat (the systematisation of the overall food policy of import substitution will be dealt with more thoroughly in the conclusive part of this chapter).

4. Sugar and coffee.

The case of coffee is special since one of the conditions of production, i.e. a tropical climate, is not to be met in a mediterranean context. However the production of sugar, particularly under the form of beet sugar, is possible on irrigated land. In order to cut imports, which averaged well over 200,000 tons during the 1960s, an organisation for the domestic production of beet sugar and sugar processing industries were set during the mid 1960s. If the production of beet sugar went up from 11,400 tons in 1964 to 35,000 tons in 1981 (a 12% net increase per year), the trend of imports for the same period went up from 212,000 tons to 575,000 tons or the equivalent of a net increase of 10% per annum. Related to the quantities imported, domestic production in 1981 was only 1% above what it had been in 1964 (i.e. 5%). In view of the trend of

imports, such a percentage only translates the relatively insignificant increase of domestic production over a period of 17 years. Here again the option of an import substitution policy did not produced any significant result in bringing down the level of imports. As for cereals, all the above categories of products were managed with different degrees under a policy of price control. Unlike cereals however, the scope of state intervention was limited. In the domain of price control and quantities supplied, the degree of state intervention was counter-balanced by the existence of an independent private sector controlling most of the meat, vegetable and fruit products. This duality between two fundamentally different modes of regulation of the food market, is seen clearly through the comparative study of the structure of retail prices.

Table IV.2.7: Retail price index of non-cereal products between 1969-83 (1969=100 except for dry beans 1971=100) (18).

	1969	(1969)	1971	1976	1979	1981	1983	Average yearly increase
Animal products								
Butter	100	(7.87)	107	152	152	203	206	7.5%
Milk	100	(0.86)	106	146	153	153	153	4.0%
Ovine meat	100	(10)	117	312	431	660	640	39.0%
Bovine meat	100	(11.8)	110	267	357	627	662	40.0%
Poultry	100	(7.2)	108	153	184	276	262	12.0%
Eggs	100	(0.25)	124	216	244	280	248	10.0%
Vegetable products								
Pulses	100	(0.16)	105	205	342	519	534	31.0%
Dry beans	N.A	100	(1.9)	145	173	204	202	7.0%
Vegetable oil	100	(2.19)	100	107	129	131	136	4.0%
Sugar	100	(1.7)	100	103	159	161	162	4.0%
Coffee	100	(7.6)	105	105	366	368	368	19.0%

Source: Ibid. (Figures between brackets refer to the actual price).

From the above table there clearly emerge two distinct groups of products: a high price increase group and a low price increase group (19). The first group, with an average of 40% yearly price increase represents the category of red meat products (with 31% increase, pulses are the only vegetable product which belongs to this group). The second group of products includes white meat products, eggs, dairy products and vegetable products in general. The distinctive characteristics between these two major categories of products is directly related to the degree of state intervention in production, prices and imports. Meat products (red meat particularly) are by far the

products over which state intervention is most restricted (the meat market is entirely dominated by the private sector). Poultry and eggs are subsidised products which cater mainly for the urban market entirely dependent on imports (it is worth mentioning that the state price regulation of such products takes an essentially indirect form through the provision of state owned enterprises and of private units, of all necessary inputs entering into the production of poultry farming such as improved seeds, equipment, genetically selected breeds, etc. As a result of the weight of private producers in production, the distribution of poultry production is operated mainly through private channels).

Generally speaking, these two products experience on average higher consumer prices than the other category of subsidised products (with the exception however of coffee). Such a price differential is mainly due to the specific conditions prevailing in the overall meat market itself (20). This domestic market like any other food market in Algeria, is characterised, as a result of an insufficient production level, by a very unstable supply which affects, because of their close substitutability, both categories of meats as well as eggs. The above retail prices hide a considerable instability. Whenever this is the case, which is very frequent, the increase in the price of red meat on the private sector leads to a shift in the demand for poultry and eggs. While such tensions last, the increase in the price of these products become unavoidable thus preparing for the stabilisation of the price of red meat at a level below which it will not fall, or rather a level from which it will instead increase in the future. Such instability exists in an intense atmosphere of speculation characterised by the prospect of short term high financial returns. The intervention of the profit maximising speculators takes the usual form of temporary withdrawals from the market of important quantities of either product in order to promote the required depression of the supply necessary for the price increase (21). Conversely, if for one reason or another (and these reasons can be several) delays in imports of eggs and/or feed occur, the immediate build up of the demand for these products unavoidably leads to their price increase, immediately

followed by a rise in the price of meat on the private market. Given the much higher price of red meat, the pressure on the price of poultry and eggs is nearly permanent. In recent years the gap between the price of red meat and white meat has tended to narrow thus showing the close link between the two products in a situation of very unstable market fluctuations. If one excludes subsidies going to animal products in general (22), the level of subsidies going to vegetable products can be presented as follows.

Table IV. 2. 8: Price subsidies accruing to vegetable products: 1974-81. (23). (U= AD million.)

	1974	1975	1976	1977	1978	1979	1980	1981
Sugar	861	1,066	334	161	-	-	-	-
Fixed veg.oil (1)	221	159	45	158	190	251	208}	
Oleaginous seeds (2)	64	115	34	62	50	35	51}	256*
Coffee	-	49	234	991	-	-	-}	
Refined veg.oil(3)	-	-	-	-	-	73	90	90
Total	1,146	1,389	647	1,372	240	359	349	346

Source: H. Haddouche, *ibid*, p. 81.

(1) Subsidies at import level; (2) Subsidies at import level and domestic level; (3) Subsidies at consumer level (* refers to the value of the three items).

The first category of subsidy are those at ONACO level (the national board for marketing), i.e. the importing body in charge of all food imports (except for cereals the prerogative of which belongs to OAIC). These subsidies occur as a result of the difference between retrocession prices and import prices. The second category of subsidy operates at the processing stage itself to allow for the control of fixed consumer prices. They apply at the level of SOGEDIA (the national enterprise for the management and development of food industries). On the whole the level of subsidies, unlike those of cereals, has been steadily decreasing between 1974 and 1981. The amount and the distribution of these subsidies remain highly unstable depending mainly on the level of world prices. The case of sugar is illustrative of the situation. Between 1974 and 1975 its import price which increased by 75% (from AD 2,046 to AD 3,593/ton), was followed by a parallel increase in subsidies. During the following year the drop in the level of subsidies was the result of a subsequent fall in the import price (from AD 3,593 to AD 1,844/ton). The further decline in import prices for this product has led

to a parallel reduction in its subsidies. From 1977 onwards the combination of a higher domestic consumer price level and a decreasing import price, has led to the suppression of subsidies for sugar altogether.

The fluctuation of international prices for fixed oil and oleaginous seeds produced the same effects on the movement of subsidies: each increase in subsidies corresponded to an increase in import prices. The same scenario of correlation between subsidies and the differential between domestic and international prices can be observed for all products under the regime of controlled prices. Structurally, the overall subsidies can be presented as follow.

Table IV. 2. 9: Overall distribution of food subsidies: 1974/81 (AD million).

	1974	1975	1976	1977	1978	1979	1980	1981	1982	Average structure of subsidies
Cereals	1,356	1,438	865	841	801	460	1,499	1,845	1,138	(61%)
Veg.oil and fat	285	274	79	220	240	359	349	346	269	(14%)
Sugar	861	1,066	334	161	-	-	-	-	303	(16%)
Coffee	-	49	234	991	--	-	-	-	159	(8%)
Total	2,505	1,512	2,213	1,041	819	1,848	2,191	1,866	1,869	(100)

Source: Ibid. P. 81.

Depending on the years, cereal products appropriated between 50 and 80% of all direct subsidies. Until 1976 sugar subsidies came second with a share of subsidies fluctuating between 22% and 34%. From 1978 onwards all subsidies have been allocated between mainly three categories of product: cereals, sugar, coffee and oleaginous products. As a privileged tool of price control the manipulation of subsidies have not however presented the policy makers with much financial constraints. Subsidies have tended to be essentially self-financing as a result of the financial ease conferred by oil rent.

C-The role of subsidies in the state food policy.

As paradoxically as it may appear the use of subsidies is not central to the state food policy of intervention as such. Its role is restricted to a mere means of achieving the objective of food price control. The price manipulation by the different state bodies has

not produced a chronic situation of cumulative subsidies. Food subsidies only appeared during peak import prices, i.e. when they increased above domestic prices (24). The case of coffee and sugar, two products for which subsidies have dropped, illustrates this quite well (25). For the period 1969/81 the net positive gross margin integrating the effects of the fluctuations of import prices and the constant upward increase of consumer prices was around AD 17,000 million. The margin for these two products alone was more than enough to cover all food subsidies for the entire period between 1974-1981, i.e. the period which underwent the highest import price increase, AD14,000 million (26). From this example one sees the conditions upon which the state policy of food price control is based: the use of import proceeds to finance the equalisation of food prices at production, processing and consumer levels. Subsidies are only indicators of the temporary state of imbalance between domestic and international prices. As such, they always inaugurate the upward revision of consumer prices. The policy of subsidies is in essence self-financing (at least, only in so far as the counterpart represented by the sheer increase of the foreign exchange value of imports is not taken into account).

Generally speaking, the achievement of the policy of price fixing is based on three main mechanisms: direct subsidies, transfer pricing and self-financing. If the first form of price control is visible, and therefore its assessment is relatively straightforward, the other forms are more difficult to assess as they involve the use of a panoply of goods, and levels of prices not easily identifiable. Broadly speaking the use of cross-price subsidies occurs whenever the price of a given product (or a group of products) is used to support the price of another product or group of products. The use of self-financing corresponds to those products whose prices do not require any form of financial support (the case of coffee and sugar are the ideal example of products which are both self-financing and cross-price subsidising (27). The question of price control however raises issues of a different sort. In what follows attention will centre on two main issues: the rationale behind the policy of food price control and the effects

produced by such a policy.

II. The impact of the state food policy.

A. The strategy of importing boards.

The impact of state intervention depends in the first place on the strategy adopted by the importing boards. During the period when import prices were low the importing boards benefited from the gap between those prices and the processing prices. This situation prevailed until the mid 1970s. Up to this date the level of domestic producer prices acted as a disincentive for importing boards for the simple reason that such a level did not allow for higher returns compared to the much lower import prices (domestic producers were paid at a level of prices well above world prices). In this context the strategy of OAIC was more geared towards imports since they find it more expensive to buy at home. Domestic production became attractive only when import prices were above domestic prices. However the degree of responsiveness to higher prices on the part of domestic producers is not linear due to the other structural factors which determine the level of output. The positive price elasticity of supply can only be conceived in a state whereby only farm gate price being exogenous, all other conditions of production - price of inputs, level of inputs, etc - are within the control of producers; neither in the private nor in the public sector are or can such conditions be met given the present state of agricultural organisation. In such a context the board attempts to increase the collected share of domestic production are therefore limited in themselves, thus making the reliance on the world market (even when prices are higher), an unavoidable issue. It is the occurrence of such a situation and the absence of flexibility between domestic and international products, which generate the highest levels of subsidy particularly since the upward adjustment of retrocession prices not only goes well beyond the capabilities of the board (28), but also because such an adjustment would have to be transmitted to consumer prices.

The position of the processing industry is of a different nature. Faced with the

obligation to supply final consumers at fixed prices, its room for manoeuvre in price manipulation is the least of all. In terms of alternatives, its strategy is bound to focus on the minimisation of retrocession prices and/or the revision of consumer prices proper. In practice the growing financial debt of such industries puts pressure on the revision of consumer prices. The feasibility of such measures has increased particularly when looked at from the viewpoint of the overall purchasing power increase of the population as a result of the massive injection of incomes following the industrialisation plans. The political decision to maintain a certain freeze on consumer prices has also meant that the processing industry has benefited from relatively constant retrocession prices even when import prices rocketed well above consumer prices (the concentration of subsidies on importing bodies has so far been the practice). Naturally the management of the importing boards, like that of the processing industries had one exclusive objective: the regulation of the domestic food market with the necessary level of imports. The implication of such a situation is that the functioning of such bodies has become *de facto* disconnected from any real incentive to promoting domestic production. OAIC has become in effect a board specialising in imports, or at least acting as a reinforcing mechanism of the domestic food industry on the international market (in 1980, the contribution of cereal imports constituted 87% of the total cereal requirement for the processing industry SN-SEMPAC). In this respect one can say that the state food policy, by exclusively focusing on the achievement of fixed consumer prices, has created a relative isolation of domestic producers.

B. The price effects of the state food policy.

Broadly speaking the state food policy has induced two major types of effects depending on the nature of the agricultural sector.

a. The immediate effect of the state food policy.

The use of fixed prices applies entirely to the production of the public agricultural

sector at both production and distribution levels. The lowest agricultural prices are to be found in this sector (the price increase after 1974 did not alter this fact that, even after revision, the prices of this sector remained the lowest in relation to the private sector). The major products involved were cereals, oleaginous, sugar beet, milk, vegetable oil, fruit and vegetables, wine, eggs, etc.

b. The effects of the state policy on the private sector.

The extent of the cereal production of the private sector which is commercialised through the state market is subject to the same price system as that of the state agricultural sector. The rest of the private sector production is governed by free market mechanisms. The price differential of food products between the two sectors however creates a whole range of situations. The effects of low prices in the public sector depends in the first place on the weight of the state boards in the total supply of those goods subject to a price regulation. The type of fixed price goods for which the state monopoly is exclusive concerns vegetable oil, sugar, coffee and powdered milk. As far as fresh milk is concerned, in principle, the SMS is entitled to sell its product on the private market. In actual fact, 75% of the quantities of milk collected by ONALAIT (the national board for milk and dairy products) which come from the SMS are in fact still collected on the basis of state controlled prices, i.e. lower than private prices.

In the case of poultry and eggs, state boards control neither their marketing network, nor the quantities available at a particular moment. For the bulk of other products, i.e. fruit, vegetables and meat, the pre-eminence of the private sector is absolute and this monopoly even extends to the marketing of a fraction of the production of the "self-managed" sector despite the supposed state monopoly. During 1964/65 "the self-managed sector which was supposed to realise 80% of the total exports of fruit and vegetables only commercialised through the state sector 53.6% of vegetables and 73% of fruit" (29). It is within this market that prices are highest and their increase permanent.

Table IV. 2. 10: Consumer price trend for few products available through the private market(1969= 100, except for 1971=100). AD/kg.

	1969	(1969)	1971	1976	1978	1980	1983	Average yearly increase
Meat								
Ovine	100	(10*)	117	312	373	557	640	38.5%
Bovine	100	(118)	110	267	304	485	662	40%
Fruits								
Oranges	100	(.67)	110	231	355	485	1,343	90%
Grapes	100	(1.57)	N.A	N.A	N.A	525	N.A	38%
Dates	N.A	100	(2.58)	165	258	610	N.A	56%
Vegetables								
Carrots	10	(.63)	N.A	N.A	N.A	480	N.A	31%
Onions	100	(.54)	150	315	385	577	1,030	66%
Potatoes	10	(.61)	105	20	5310	362	534	31%
Tomatoes	100	(1.07)	131	252	388	476	747	46%

Source: L'Algérie en quelques chiffres and Annuaire Statistique de l'Algérie 1981.

For the period under investigation average price increases have not fallen below a 30% yearly increase. On the whole it can be said that between 1969 and 1983 prices have been increasing at an average rate of about 50% per annum. Such increments stand in total contrast to state price controlled products: 7.5% for butter, 4% for milk, 2.6% for vegetable oil, 4% for sugar, 19% for coffee, 10% for eggs, 12% for poultry, 6% for bread, 5% for semolina and 3% for couscous for the same period. The parallel movement of prices in the two markets introduces an alteration in the relative prices of agricultural products which in turn react on the structure of agricultural output itself. One must also point out that the price factor is however more economically significant, i.e. as a stimulant, for private agricultural producers - particularly in the capitalist section of the sector - than for the producers of the "self-managed" sector. Comparatively speaking, the former have a relatively greater freedom over the organisation of the conditions of production, the mode of distribution and above all the type of crops.

In contrast, the bureaucratic rigidity under which the workers of the SMS operate in terms of pre-set norms involving the nature of the crop to be farmed and its mode of farming, the terms under which to sell production, and the channel of its distribution etc., arbitrarily excludes the entire sector from the mechanisms of market

determination. If one excludes permanent crops (citrus fruit, dates, etc.) characterised by a short and middle term structurally rigid supply because of the biological cycle of production (30), the high prices of vegetables and meat products have certainly had a determinant effect in the shift of agricultural resources towards the development of such products particularly since the 1970s. The first industrial programme of Algeria having been initiated in 1970, the pressure on food supply from increased demand must have taken place during the subsequent years. In this respect, the realisation of industrial investments was closely linked not only to an important increase in demand but also to a new type of demand based on high incomes and catering especially for fruit, vegetables, and meat. The policy of development based on "investments in heavy industry tends to reinforce the concentration of incomes at the benefit of social strata which control public capital or hold private capital, or belong to the minority of qualified workers" (31). The following table evidences this sense of causality.

Table IV. 2. 11: Production trends for certain products marketed in the private sector(U= 1,000 tons).

	1967/69	1970/73	1974/81	Rate of increase between:	
	Period I	Period II	Period III	Period I & II	Period II & III
Average production of market-garden products	700	800	1,200	14%	50%
Average production of citrus fruit	720	800	800	14%	0%
Average production of red meat	76	105	110	38%	5%
-bovine and ovine meat	54	95	95	68%	4%
-poultry	24	27	118	12%	337%

Source: *Annuaire Statistique de l'Algérie* and *"Séries Statistiques"*. Direction Générale des Statistiques. MPAT. 1984. and K. Hadjiat in *"Evolution de la consommation en Afrique: le cas de l'Algérie"*. Ibid. p. 104.

The most important increases concern vegetables and above all meat products. In terms of land use, overall increase of land devoted to market-garden products in both agricultural sectors is among the highest of all crops: index 100 in 1964/65, 268 in 1979/80. For other crops the indices in 1979/80 were: 113 for cereals, 217 for pulses, 188 for industrial crops, 115 for natural fodder, 70 for olive tree and 148 for dates. Only land increment for artificial fodder holds the highest record of increase

with an index of 578 in 1980 (the exact sectoral distribution of this land is not known to us but its contribution to the private sector is a well established fact). If in general the growth of market-garden products is linked to a commercialised agricultural sector based in the intensive use of irrigated land, the conditions prevailing in the growth of meat products are of a different sort. The main sources of meat increase are derived from bovine and ovine meat on the one hand and poultry on the other. The overall characteristics of animal husbandry in Algeria is based on the extensive use of large areas of pasture land (90% of herds are produced on the basis of itinerant husbandry (32). Under the influence of high income generated demand, a more capitalist form of intensive livestock rearing emerged, combining the size of the immensity of the ground rent free public pasture land (35 million ha), the development of artificial fodder (1.8 million quintals on average during 1963/69, 2.8 million quintals during 1970/73, 5.3 million during 1974/79, and 7 million during 1980/82), the extension of veterinary controls (33) and the intensive use of modern equipment in general. To counteract difficulties experienced on the Algerian Steppe and prevent the disadvantage associated with traditional extensive breeding (the pursuit of grazing space over a wide area meant a drop in the actual animal weight), the practice of modern means of transportation, to move herds from one point of grazing to a richer one in order to prevent the loss of animal weight and maximise therefore the financial returns/kg weight, has been one of the achievements of this new form of modern livestock breeding.

The most important increase however remains that of intensive poultry farming. The achievements attained were based on the integration of an industrial process combining genetically high breeds fed on a balanced nutritional diet based on high calorie cereals (mainly maize) and high protein oleaginous (mainly soybeans) and complemented with the necessary vitamin and mineral requirements.

On the whole, the development of the meat market guided by high income demand, resulted in an alteration between the price of meat and that of cereals, which in turn

transmitted its effects to the balance between vegetable production, especially that section of vegetable production catering for human consumption, and animal production. In view of the ratio between the price of meat and cereals (7.5 in 1970 and 22.1 in 1980 (34), it is therefore becoming more and more remunerative to engage in meat rather than in cereal production. It is however worth mentioning that the import of cereals for animal feed has a cushioning effect on the degree of reconversion away from cereal production for human consumption. Over the past decade (1969/80), the structure of cultivated land allocated to cereal crops underwent changes in two opposite directions: a decrease in the land under wheat cultivation, and an increase in the land under barley, oats as well as artificial fodder cultivation (35). In the private sector land devoted to oats and artificial fodder doubled. At the level of the entire sector, the proportion of cereal land devoted to barley and oats increased from 32.5% to 44.5% over the decade. The increase in the total acreage of barley, oat and artificial fodder, is significant as it corresponds to a shift in production from human to animal consumption. Between 1968 and 1980, the study of the major household surveys revealed that the amount of barley in the diet of the population, particularly rural, had been reduced to a minimum. The parallel movement of the drop of barley in the diet of the population on the one hand and the increase of its acreage on the other is the evidence of the shift that is occurring from subsistence cereals to animal cereals). The alteration in the balance between animal production and vegetable production directly geared to human consumption, remains however a potential alteration, due to the existence of counter-tendencies. The shift in cereal production thus remains limited in terms of the overall needs of feed requirements. In so far as the total requirement of animal production is concerned, the contribution of the private sector during the last years fluctuated around 1/2 of the needs (36). In itself the shift from subsistence cereals to animal cereals is counteracted by the weight of the public agricultural sector and particularly the pre-eminence of public pasture land which still offers to livestock breeders free access to grazing (*de facto* also, part of the grazing of private livestock breeders is takes place on the land of the SMS). The capitalist model of intensive

livestock farming, based on cereals feed and the production of artificial fodder, though limited to a section of livestock breeders, tends to be substituted by extensive animal husbandry particularly in times of drought when pasture land cannot sustain the size of livestock herds (37). Sustained by permanent meat price increases, the diffusion of the model of intensive meat production received its backing from state intervention and imported cereal feed progressively complemented domestic production (38). Feed is imported in processed form (fish, flour, oil-cakes) as well as in the form of maize and barley. The following table gives the structure and origin of animal feed during the past decade.

Table IV. 2. 12: Animal feed (imports + domestic production) between 1970/81 (U= 1,000 tons).

Period	1970	1974	1976	1978	1979	1981
Total supply (Imports + domestic production)	429	960	507	1,324	1,487	1,015
Imports						
Animal feed	14	27.8	34.4	82.7	72.3	90.9
Barley	-	87.3	66.6	519.6	342.2	103.8
Maize	-	16.8	95.2	187.2	167.9	276.2
Total imports	14	132	196	790	582	471
% share in total supply	3%	14%	39%	60%	39%	47%
Domestic production						
Barley	372	742	260	456	794	483
Oat	38	79	49	80	110	60
Maize	35	6	2	860	1,500	1,400
Total domestic production	415	828	311	534	905	544
% share in total supply	97%	86%	61%	40%	61%	53%

Source: U.N Yearbook of International Trade Statistics and Séries Statistiques.

The pre-eminence of domestic cereal feed production has been drastically challenged by imports since 1974. In recent years imports contributed to nearly 1/2 the cereal needs of the growing domestic animal feed market.

As far as the calorie and protein requirements of animal feed are concerned, the contribution of domestic production remains uneven. If domestically produced barley accounts for up to 3/4 to 2/3 of total barley supply, oleaginous (the main protein source of animal feed), and more particularly maize products (the calorie source)

however requires a heavy reliance on the international market (39). As a result of the spread of the new model of meat production, the size of animal feed requirement was considerably increased in relation to the capabilities of domestic cereal production: In 1970, 1/4 of the domestic cereal production was necessary to meet the requirement of meat production against well over 1/3 in 1981 (40).

Table IV. 2. 13: Animal feed requirements and domestic cereal production (U= 1,000 tons).

	1970	1974	1976	1978	1979	1981
I.Feed requirement	415	828	311	534	905	544
II.Domestic cereal production	1,735	2,680	1,142	1,619	2,417	1,525
% share of feed in domestic production	24%3	1%	27%	33%	37%	36%

Source: Ibid.

In the market for fruit and vegetables the impact of high prices produced the highest effects in the organisation of the production of market-garden products. Between 1969 and 1980, the land devoted to their production was more than doubled from 108,000 ha to 225,000 ha. The contrast between the two major sectors however remained significant (41). The impact of price increases was highest for the private sector which increased its land cultivation by over 100% (its share in the land of the sector increased from 56% to 60%), and its output from 53% to 58% of total supply. A similar situation characterised the sector of "agricultural revolution" in terms of output and land. But this sector remains insignificant because of its size. The "self-managed" sector was the sector which displayed the poorest performance: with only 50% net increase in land under cultivation, its share in total output fell from 47% in 1969 to 33% in 1980.

On the whole the responsiveness to higher market prices was much more obvious in the private than in the public sector. Needless to say the two sectors cater for entirely different demands and therefore for entirely different social groups. The imbalance between the two sets of prices becomes *de facto* the dividing line between the low income groups, *de facto* excluded from a rich and balanced diet (42), and whose physiological reproduction is entirely dependent upon fixed price products (cereals,

vegetable oil, sugar and coffee), and the highest income groups whose reproduction is essentially met by domestic production in the form of a balanced diet (accessible at much higher prices), based on a high proportion of meat products, fresh fruit and vegetables (43). The combining effects of low incomes and the increasing cost of food in the budgets of households have in actual fact transformed food imports (with the contribution of public agricultural production), as the dominant channel through which the food demand of low income groups is being met while domestic production (particularly private), became, because of its high prices, the prerogative of high income groups. This social polarisation expresses the conditions under which the formation of the different social classes accompanies the social mode distribution of agricultural production. In such a context, "the formation of classes becomes inseparable from the conditions under which control over the agricultural surplus is organised"(44), and the emergence of an agricultural surplus is by definition inseparable from the emergence of a dominating class able to set a limit to the level of consumption of the agricultural direct producers.

After assessing the implication of the state food policy with regard to the structure of agricultural production and its corresponding social distribution, we now turn to the more specific study of the implications associated with the adoption of the food model of import substitution as a means of increasing agricultural output with a view to minimising the level of food imports.

C. Food policy of import substitution.

Unlike its industrial strategy import substitution in agriculture corresponds to the line of policy which has been most systematically followed by Algeria. Such a policy was pursued for three main products: animal products (industrial poultry farming), sugar (sugar beet) and vegetable oil (oleaginous products). In itself the aims of such a policy can only be praised since it mainly aimed at substituting imports by domestic production. But given the nature of the problem facing the Algerian agriculture, the question is not so much one of substitution as one of domestic production. In other words

an import substitution is only possible when the management of domestic production does not represent a constraint in itself, a situation which is precisely that being experienced by Algeria. In the absence of such a condition, an import substitution policy is not different from a re-play of the scenario which so far has been that of domestic production itself.

Looked at from a different angle, the assessment of the issue reads as follows: if in the first place there was a need for imports this has only been so because of the inefficiency of domestic production. To promote a food policy of import substitution (IS) presupposes therefore that there is no constraint on the supply side. To try to operate such a policy in the face of an already structurally rigid supply (see the rise of imports and the stagnation of production over the past two decades) will lead to two main situations: an increased dependency on the international market for the provision of the inputs necessary to operate such an IS policy (as in the case of oleaginous and sugar), and increased inefficiency in the domestic organisation of production itself (as a result of the introduction of new crops such as beet sugar and oleaginous). Let us examine these two points in turn.

a. Import substitution and dependency.

With the exception of the industrial activity of poultry farming, this policy of IS has been exclusively located within the state sector. The diffusion of poultry farming, initiated within the public sector has been intensively extended to private entrepreneurs with a package of concessional measures: the supply of subsidised feed, easy terms of access to the necessary investment credit, etc. If the success of this line of production is in no doubt (output increased from 24,000 tons in 1968 to 118,000 tons in 1977), its performance however ought to be questioned upon the very conditions which made it possible, i.e. the increased reliance on imports. In this respect, if there was a case for IS in meat production, there was also a case for the substitution of one category of imports (poultry production) by another (the entire

technological package of poultry farming). If the domestic production of meat is desirable, the question which ought to be asked is: under what specific mode or on which technological basis should operate? The consequence of this policy is its shortsightedness with regards to the consequences associated with the adoption of a model which originated, and was developed in a different socio-economic context altogether: that of the USA in the 1930s, endowed with important cereal surpluses (whose transformation into animal feed was at least in conformity with American resources), and enjoying the benefits of an advanced industrial development of its economy and particularly of its agriculture (45). In terms of alternatives, the technical option of the Algerian choice of poultry farming is not the only available one. Animal production is compatible with more than one technique. Rather than the conception based on animal production that competes with the same resources as those used by man (as in the case of most types of "modern" West European animal farming), there is the conception of animal production and organisation of agriculture whereby animal husbandry "can be organically linked to agriculture, but on a particular pattern, made of domestic animal resources not used by man himself (common land, fallow and stubble, natural meadows not suitable for cultivation etc." (46). Close to the former conception is the example of Chinese pork breeding based on the agricultural by-products such as "vegetable scraps products, rice husk, maize cobs, soya stalks and leaves, waste from sweet potatoes and other vegetable, cattlecakes, etc., nutrients not used by man such as certain sea plants [the narcissus or water hyacinth can be produced at the rate of well over 1,000 tons/ha], or unusable elements such as certain types of spontaneous vegetation" (47). In his comparative study of the two polarised Chinese and Danish models of pork breeding, B. Rosier concludes that "as an adult Danish pig consumes a little more than a human's ration of cereal-based diet ration, if each Chinese pig were replaced by a Danish one (at a rate of one pig per person), China would be reduced to famine" (48). In the context of a country like Algeria which is not even able to control its cereal production, the adoption of such a mode of production represents by no means a "heavy tendency" of its food policy (the very necessity of the

presence of animal proteins in the daily human diet is even widely question when calories requirements are not taken into account: see the article by Professor Leonard Joy "Food and nutrition planning", Journal of Agricultural Economics, Volume XXIV, N° 1, January 1973: 165-192).

b. Import substitution and economic inefficiency.

During the mid 1960s Algeria engaged in the domestic production of sugar beet and oleaginous products in order to cut their respective imports. The experience of sugar beet was based on the objective of substituting imports of refined sugar by the promotion of the domestic production of sugar beet and the parallel setting up of a sugar mill industry. The development of domestic production was not without difficulties and set backs due to attempts of crop farming methods on both dry and irrigated land.

In 1966 the persistence of low yields lead to a complete suppression of the crop in the west of Algeria (*Sidi Belabès*) due to a shortage of water (49). The availability of irrigated land was further to represent the main constraint as the method of dry farming proved unsuccessful. The limited supply of irrigated land on the estates (90% of the total land under sugar beet were located in the "self-managed" sector) represented the actual physical limit (less than 4,000 ha) beyond which the crop was to be extended. Yields on the whole, remained unstable at constantly low levels: 20 quintals/ha in 1970, 18 in 1976, and 15 in 1980.

The overall conditions under which production was operated (the dryness of the air and the southern heat tended to reduce the sugar content of the crop, lack of water irrigation proper, and the uneconomic viability of dry cultivation, etc.) greatly hampered the development of a crop which in many aspects represented a rich source of calorie supply, feed in the form of pulp, stalks and leaves, and employment opportunities, etc. After well over a decade of experience, the crop is still at the experimental stage (50).

The case of oleaginous products is another example of the short-lived experience of

industrial crop promotion. In the early 1960s the industrial activity focused mainly on a few processing units geared towards the processing of oleaginous imports (mainly rape seeds), and mixed vegetable oil. Sunflower seeds were the first oleaginous crop to be initiated during the mid 1960s. The choice of the crop was based on the grounds of high yields under dry farming conditions, as well as on a high oil extraction factor (between 40 and 50%). The results however proved well below expected objectives. Yields/ha remained low: 4 quintals in 1970, 1 quintal in 1978, 6 quintals in 1980 (51). Also the early development of the crop could not find an outlet as the existing oil industry was mainly equipped for the processing of rape seeds (the multi-seed processing industry was set up only after 1974). In the face of the different setbacks associated with the production of sunflowers, new oleaginous varieties were introduced: soy beans under irrigated farming and particularly safflower (the relevance of the later crop was that it offered the possibility of being cultivated under dry farming conditions using fallow land). But such potentialities could not be materialised. The combination of cumulative inefficiencies produced "insignificant" yields in the terms of the IDCI (52), the official institution in charge of the development and promotion of industrial crops.

The end result of the experience of IS concerning industrial crops is best summarised by I. Molina who closely studied this industry: "the results of 15 years of experimentation [the author wrote in 1982] and of promotion of yearly industrial crops are thus very disappointing: during all this long period, neither the technical problem of the crop, nor the problem of marketing linked to the processing industry, have been solved. An official document of MARA states without astonishment that "oleaginous crops, which could be of considerable interest, are still at the experimental stage" (53).

CONCLUSION

The notion of food policy in the Algerian context does not assume a deliberate aspect in the sense of a planned nutritional target that the agricultural activity is to achieve. As no nutritional objective exists as such to serve as a guide for a coherent agricultural policy, the state food policy is in essence divorced from nutritional considerations. In the present context, the food policy of Algeria ought to be distinguished from its agricultural policy. As such these policies are conceived in terms of their relative reciprocal autonomy. If the agricultural policy can be reduced to an extension of the state control over the ex-colonial agricultural sector and the relative neglect of the private sector in terms of access to basic inputs through their simple availability on the market, the food policy can be assessed through the set of measures which have a bearing on the content, the level and the structure of food needs, i.e. the level and the structure of imports, the level and structure of food prices, and the proportion of fixed food products prices, etc.

Thus conceived, the state food policy is in effect reduced to: the management of the external food constraint which takes the form of an increasing supply of a range of products secured on the international market - in their listing such products correspond very closely to the barest definition of a diet "not so much determined on the basis of a balanced diet (meat imports are recent and limited), but rather as to what is necessary and sufficient for the poor" (54) - and the distribution of basic food stuffs at a fixed price.

In its implicit assumption, the state food policy is based on low income groups, and its scope for intervention is limited to the most elementary range of food products to meet such a demand. Partial in scope, it tends to operate in a context of a structurally stagnant domestic production. In itself, this context of intervention is contradictory in nature as it maintains a permanent instability between and within the two categories of food market. The characterisation of food demand, and as such that of the food market

itself, is also entirely dependent on volatile conditions: permanent short term cyclical shortages of food products (subsidised and non-subsidised alike), extreme price variations on the private market, constant tensions as a result of speculations on food availabilities, and permanent price increases, etc. In short food expectations do not coincide with the state of the market in terms of availabilities. Rather than the supply adjusting itself to the demand, it is the latter which adapts itself to the former under whatever conditions prevail (level of prices and of availability). Such conditions operate *de facto* a clearing of the market on a clear-cut class distinction whereby high income groups meet their demand through high prices, and low income groups meet their respective demand on the basis of fixed price products which in principle guarantee minimum subsistence.

The level of intervention of the state has led to a form of food policy which tends progressively to disconnect the increasing domestic food needs from the development of agricultural production itself (domestic demand is indeed met on an increasing scale from imports and/or from a structure of agricultural production which operates on an increasing use of imported inputs). Such a result remains however inseparable from the very conditions upon which the new patterns of consumption are being met. The international market has become the main provider of food products necessary to the reproduction of the labour force of the majority of the population, while the free market, dominated by the production of meat, fruit and vegetables has become *de facto* earmarked for the needs of high income groups. Such a social polarisation, in terms of incomes and patterns of consumption, in turn reacts on the mode of consumption of oil rent. The necessity of meeting the conditions of reproduction of the labour force at a given nutritional level and at fixed prices on the basis of an increasing reliance on food imports, limits *de facto* the extent of oil rent which would have strictly been used for investment purposes (by their nature and as a result of their wage-goods form, food imports have progressively acquired, *ceteris paribus*, the characteristics of an irreducible and incompressible import constraint). The procurement of imported basic

wage-goods supplied at a low price has however a positive effect on the general conditions necessary for the promotion of capital accumulation: the supply of a labour force available at a minimal cost remains, all things being equal, a powerful prerequisite in the maximisation of capital valorisation that feeds on the highest rate of profit possible.

As such this policy appears as a contribution by the state - the institutional embodiment of capital - to the reinforcement and the development of a domestic capitalist class at large. It is indeed through the use and allocation of oil rent that the state most contributes to the preservation of social classes by reproducing the economic conditions of their existence. Through its industrial project, the state guarantees both fundamental conditions of capital valorisation: the reproduction of the objective and subjective conditions of capital accumulation.

The state management of these two types of constraint (so far expressed in the inability to domestically reproduce both constant and variable capital) constitutes in itself a form of state subsidy for the promotion and development of capitalism. This assisted form of capitalist development, whereby the state acts as its depository, becomes necessary only in so far as it still bears the stamp of the historical conditions under which European capitalism intruded on the pre-colonial agro-pastoral Algerian social formation.

NOTES

1- The increase in feed imports is no more no less than the manifestation of cereal consumption diversification the proportion of animal consumption growth implying in itself a reduction in the direct cereal consumption. According to H. Delorme Deficite alimentaire et developement: l'Algérie in Revue Du Tiers Monde, cereal feed doubled between 1970 (100,000 tons) and 1976 (210,000 tons). On the basis of available data, the share of feed in total cereal imports increased from 14% in 1970 to 16% in 1976. In other words a greater proportion of domestic cereal production served the purpose of feeding animals.

2- Bouzidi, Abdelmadjid Productivité du travail dans l'agriculture Algérienne et problèmes de la commercialisation des produits agricoles. CREA 1977, quoted by Molina, Ignasso Les industries en aval de l'agriculture in L' évolution de la consommation alimentaire en Afrique: le cas de l'Algérie" CREA. Alger & IIES Geneva. 1982. P. 235.

3-See Appendix AIV.11. ✕

4-Bedrani, Bedrani. Ibid, p. 123. It is also worth mentioning that the legal decision to "freezing" the prices of the main inputs such as fertilizers, tractors, combine harvesters and ploughs, was not totally exempt from exceptions. Thus between 1974 and 1977, the following increments were observed: 9% for pneumatic tractors (the 65 Horse power category), 17% for caterpillar tractors, 9% for ploughs, etc.

5-Such facilities for the reception of imports of cereals are also comparatively less costly for OAIC than the heavy domestic collection of cereals which involves a complex network involving the mobilisation of cereals from the countryside and its transportation to the Northern urban based cereal processing industries. The bulk of the activities of the board and of the processing industry are also mainly focused on the concentrated urban market.

6- The interpretation of the difference between domestic and international prices ought to be interpreted with great care as this difference conveys an extreme difference in

yields between Algeria and cereals exporting countries. For the comparison between the level of prices to be significant, it is required that Algeria operates its cereals production in the same overall condition as the cereal surplus countries.

7-Delorme, H. Ibid, p. 11.

According to Bouzidi, Abdelmadjid the gross profit of the cereal board was AD 24.8 million in 1969/70, AD 19.4 million in 1970.71, AD 116.3 million in 1971/72 and AD 30.9 million in 1972/73.

8- Apart from retail traders and direct consumers, the processing cereal industry supplies the bakery industry with the necessary quantity of wheat flour for the production of bread, an item which is increasingly dominant in the daily diet of the population, particularly urban. The supply of such a product is increasingly becoming a sensitive issue whenever its price undergoes periodical increases (as most of the bakery business is entirely within the hands of the private sector, the official price is hardly respected) or whenever its availability proper is tending to be more and more erratic as is the case during the past years. The mode of consumption of this product is essentially dictated by the mode of urban dwelling which prohibits *de facto* the traditional cooking of home made bread. The urban mode of life also favors the consumption of a product whose industrial production is at the same time time saving for the housewife.

9- The relative constant level of subsidies at SN-SEMPAC level is in itself a yardstick measure of the extent to which the retrocession price was allowed to increase.

10- Such mechanism may tend to represent a self-financing process based on compensation: low import and production prices serving to finance future subsidies. OAIC acts therefore as a form of compensatory fund subsidy. The logic attached to such an economic mechanism is that OAIC will tend to keep producer prices as low as possible since import prices are beyond its control by definition. The cereal board obeys therefore by its very nature as any commercial enterprise.

11- In the case of Algeria which conducts a voluntarist policy of food consumer price control, the question of subsidies implication raise the whole issue of management of

food crisis through the effects of the present state food policy intervention. This aspect of the question will be taken up in the second part of this chapter.

12- The importance of this increase is only contrasted to the previous period which did not experience any increase at all. However important the increase may be for the subsequent period, it remains that no price was doubled by 1983.

13- The volume of incomes underwent an annual rate of increase of 8% during 1967/69, 11% during 1970/73 and 17% during 1974/77. cf. S. Bedrani. Ibid, p. 115.

14-Tou, A. L' évolution de la consommation alimentaire en Afrique: le cas de l'Algérie. Ibid.

It is also worth mentioning that the 1978 price revision of SN-SEMPAC was the first of its kind since 1959.

15- It is worth mentioning that the rates of cereal demand increase are by far in excess of the rate of demographic increase evaluated at 3.2%.

16- For the non-cereal subsidised products the role of imports is overwhelming. As such they provide for the entire field of state intervention.

17- Dry pulses are rightly termed the meat of the poor. During the last decade the proportion of roots and tuber and pulses in total vegetable imports (on average 90%) represented respectively on average 60% and 30%.

18- The price index is based on the use of the unit of AD/liter for vegetable oil, AD/unit for eggs and AD/kg for the rest of the products.

19- If generally speaking retail prices are urban prices, it ought to be noted that the permanent state of scarcity affecting food availability is such that, whenever there is a price differential between the urban and the non-urban market, the attraction effect of high prices on the urban market is such that the phenomenon of equalisation of food prices between the two markets tends to operate on a permanent basis. But if prices tend to be the same between the two markets, the concentration of high incomes in urban areas tends also to deprive the non-urban market from the commercialisation of an important fraction of the agricultural products.

20- It ought to be pointed out that the market for poultry and eggs cater mainly for the category of low and middle income groups. In normal conditions, the ratio between the price of red meat and white meat is 1 to 4. Red meat available through imports and distributed through state controlled shops is sold at about 2/3 the value of the meat available through the private market. The insignificance of such imports for the ordinary market is further worsened by the fact that such imports are appropriated in priority by the different pressure groups (military, high ranked civil servants, etc.).

21- The network distribution for poultry and eggs tends to be concentrated in the private market.

22- The disturbances on these markets are not devoid directly or indirectly of the collaboration and the responsibility of high ranking officials at one point or another along the complex network of public boards and enterprises existing from the importing stage to the distribution end of the chain. Cases of cargos of subsidised meat being sold at full price on the private market, the priority terms at which speculators acquired cargos of eggs at the peak of intensive speculation accompanying scarcity are not uncommon practices but rather well established practices along which a fraction of the commercial bourgeoisie established its economic power.

23- No data are in our possession but it is very likely that no animal product as such is benefitting from any form of subsidy. The trend in import prices (particularly for meat and butter) tends rather to suggest that the impact of such products is more of a source of gross positive profit for the state. The price control of these products on the domestic market has been steadily kept at a level higher than the import prices.

24- Such situations are only momentary not only because of imports prices fall but because at domestic level any import price increase has always been systematically followed (if not anticipated) by larger increases in consumer prices. On a whole, if one excludes the exceptional period of high international prices during the mid 1970s, the domestic food market has always been characterised by a market whereby consumer prices were higher than international prices, a situation leaving room for gross positive margins.

25-See Appendix AIV.12.

26- If however one is to take into account the same period, the net positive gross margin derived from coffee and sugar between 1974 and 1981 (AD 15,500 million) was more than enough to finance all food subsidies.

27- The absence of subsidies for animal products tended to suggest that the price control policy relied on such mechanisms. The following trend in the gap between the domestic price of bovine meat and the price of meat imports will give an idea of the extent of the positive gross margin: AD 13 /kg in 1975, 21/kg in 1976, 29 /kg in 1977, 28/kg in 1978, 33/kg in 1979, 48/kg in 1980 and 63/kg in 1981. The case of butter is also significant. Between 1970 and 1981 the positive gross margin allowed by the level of its domestic and international price, amounted to a total of about AD 6,000 million.

28- Retrocession price fixing depends on the intervention of the ministry of trade, the Ministry of light industries and the arbitration of the Ministry of finance.

29-Bouzidi, A. Productivité du travail dans l'agriculture Algérienne et problèmes de commercialisation des produits agricoles RASJEP, N° 4, December 1977, p. 514.

Quoted by Bedrani, Slimane. Ibid, p. 140.

30- It is not surprising that the highest price increase concerns citrus fruit such as oranges.

31- Delorme, H. Ibid, pp. 10-11.

32- Over 90% of Algeria ovine and bovine livestock belong to the private agricultural sector.

33- Unlike poultry farming, livestock rearing remains basically based on local breeds.

34-Amara, Ait. Effets des importations alimentaires sur la structure de la production agricole in "L' évolution de la consommation alimentaire en Afrique: le cas de l'Algérie", ibid, p. 122.

35-See Appendix AIV.13.

36-This constancy is largely due to the increase in the acreage of the "self-managed" sector and the sector of "agricultural revolution"(from 0.3 million ha to over 0.4 million ha from 1969 to 1980). This incremental acreage which corresponds more to an authoritarian decision by the Ministry of agriculture than as a result of the choice of the producers themselves, stems from the rationale to possibly substitute soft wheat import by domestic production.

37- Official estimates gave 6 million units of heads (1974), other estimates (El Kenz, H. Marché/élevage bovin in Débats et Critiques" AARDES. Alger, 1978, p. 90.) gives between 12 and 13 million for the same year.

38- It goes without saying that such imports were not solely restricted to fed. The role of imports acted as an integrated vector of diffusion of the model of intensive poultry farming. As such these imports were the embodiment of the entire process of production from the genetically high breeds to the necessary equipment.

39- It is open to question whether the adoption of such farming system establishes a sense of balance between production and domestic resources.

40- The contribution of imports and their domestic social determinants played the decisive role in stimulating, establishing and consolidating the mode of intensive meat production from which is derived the above tendency of agricultural organisation.

41-See Appendix AIV.14.

42- Cf chapter on the patterns of food consumption (the model of food consumption of this social category is mainly based on the overwhelming weight of cereal products. Deficiency is that of meat, fruit and vegetables)

43- Such overall characteristics contain in themselves a clear cut class specialisation particularly as the terms of access to the conditions of reproduction of the different sections and groups of society are concerned.

44- " The conditions of the setting up of a relation of power established by one social group capable of imposing a limit to the consumption of the producer and to set itself therefore in a position of a dominating class" is the condition of emergence of an

agricultural surplus. Rosier, Bernard. Types de développement et rapports sociaux: pour une nouvelle stratégie du développement agricole et agro-industriel. Monde en Développement N° 29/30. 1980

45- The transplant of the American model of farming in the context of the "backward" Algerian agriculture, requires for its technical reproduction a permanent dependency on the imports of all aspects of the production process and above all the socio-economic conditions capable of producing the necessary cereal surplus. The adoption of the American model of farming remains in itself an important indicator of the finality of agricultural development in itself.

46-Rosier, Bernard Clés pour une stratégie nouvelle du développement. Les Editions Ouvrières. UNESCO. 1984. p. 151

47- Ibid, p. 151.

48- Ibid, p. 152.

A study on the livestock situation in developing countries conducted from the case of dairy development in Kenya raises the same concern. The question that the authors raises is most fundamental in designing a livestock strategy: "to avoid 'prescribed' yields and production targets based on animal breeders conceptions of what 'ought' to be achievable from a cow - given all ideal input requirements. It is essential to start at the other end - with the resources that people have available - and try to design improvements which are possible within these limits [...] start by studying the farmers and their resources, and only then look at the cows". Howard Wagstaff, Grace Gachacha, Henry Mbogoh. The Livestock Situation in Developing Countries Science, Technology & Development Volume 4 N°3 & 4, August 1986-January 1987

49-Molina, I. Ibid.

50- "Trial of seed varieties and sowing are still listed in the 1980 programme of experimentation of the IDC (Institute for the Development of Industrial Crops). Molina, I. Ibid, pp. 216-217.

51- Part of the crop was wasted because of predators attacks.

According to an official document quoted by I. Molina, AD 8 million of crops was lost

that year.

52- Less than 1 quintal/ha against an expected minimum of 5 quintals/ha. According to I. Molina, during 1977/78, 20% of the 18,000 ha of the safflower were harvested.

53- Ibid, p. 220.

54-Chaulet, Claudine L' éloge du couscous in "L' évolution de la consommation en Afrique: le cas de l'Algérie". Ibid, p. 407.

OVERALL CONCLUSION OF THESIS

In retrospect this work is a measure of the particularism that characterised the capitalist development of Algeria since the early years of its colonisation in 1832. As such capital accumulation emerged within the context of two distinct historical phases. The colonial period (Part I) saw the emergence of an essentially export sector operated in accordance with the interests of settlers and organically dependent on the French economy either as a market outlet or as a provider for the settlers' demand for consumer and capital goods. Based on massive peasant expropriations and land confiscations, the colonial economy brought about the deepest transformations in the domestic agro-pastoral economy. The 'corrosive' impact of the diffusion of capitalist relations of production and the weight of the extra economic factors in the shrinking of tribal land only magnified the fragility of a social formation whose reproduction excessively depended on nature as a result of a poor labour productivity. The transformations of the domestic economy acquired the features of an economy increasingly integrated into the cycle of valorisation of capital. While confronting capital within the capitalist mode of production, peasant households remained as before small commodity producers (here capital did not directly attempt to organise peasant production). At the same time the initiation of such a formal mode of subsumption of peasants by capital bore a powerful relation to the pattern and conditions of their progressive class differentiation into those incapable of maintaining simple commodity production (the case of poor peasants), those capable maintaining it longer (in the case of middle peasantry), and those rich farmers capable of transforming themselves into a class of capitalist farmers.

As a result of the technological methods proper to colonial farming (the systematic use of labour-saving technology in cereal farming and the development of vine growing farming based on seasonal labour), the peasant economy functioned essentially as the main provider and reproducer of free labour, as well as the main regulator of cheap

labour (the peasant economy guaranteed its own autonomy as a result of the exclusion of the majority of the population from the permanent status of wage earners). The emergence of increased peasant pauperisation which precluded their proletarianisation (directly for landless peasants, and indirectly for the category of household peasants unable to reproduce themselves through the sole direct expenditure of their labour on their small plots of land), was not however accompanied by their economic transformation into a permanent rural proletariat, which could find the condition of its employment in the capitalist agrarian sector, and/or a permanent industrial proletariat. The absence of a local industry magnified the limits of a colonial mode of accumulation which remained agrarian throughout. The inability of the colonial mode of capital accumulation to provide - beyond the exclusive sphere of settlers alone and particularly their agrarian interests - for a fuller development of capitalist relations of production through industrialisation also marked the end of the colonial hegemony. The independence of Algeria opened radically new perspectives for domestic classes and for capital accumulation.

Oil and the form of rent associated with it soon conferred upon the post colonial state the means of an hegemonic entrepreneurship translated in a massive and intense accumulation of fixed capital located in the 'public' sector (Part II). This new form of capital accumulation, which inaugurated an era of rapid extension of wage relations was also the correlate of an extension of commodity relations through the development of a state induced private/capitalist industrial sector. Under the requirement of capital valorisation, and as a result of the historical particularism of the capitalist development of the Algerian social formation, the direct management of the value of labour power began to be operated as a policy *à part entière*. Bound to the development of industrialisation the agrarian question (Part III) was essentially thought in terms of its functional contribution to meeting the new food demand. The passage from the colonial mode of accumulation, which *de facto* resorted to the contribution of the peasant economy for the production and reproduction of cheap labour, to the post-colonial mode of capital accumulation was effected on the basis of an extension of the

reproductive food function to state farms which progressively abandoned their colonial specialisation based on export promotion (in an attempt to increase Algeria's self-sufficiency the reduction of agricultural exports affected food and no-food alike), and new cooperative farms issued from the post independence programme of land reform. Bound by a stagnant agricultural production in the estates and a programme of land reform which on the evidence available neither improved the economic status of the peasants nor prevented their increased pauperisation, overall state intervention which included more systematic measures comprising price controls, marketing monopolies etc. (Part IV), maintained the subsistence level of reproduction of the value of labour power while at the same time increased the extent of domestic food deficit as a result of the increased diffusion of wage earning relations related to its industrial policy. The management of the price of wage goods became thus inseparable from both the reproduction of the determinants of the prevailing agrarian crisis (in itself a hidden aspect of the prevailing mode of accumulation), and the necessary regulation of the value of labour power.

Conceived in a favourable context of increasing international oil prices, the conception of a policy of regulation of labour power based on the supply of cheap wage foods - restricted in its scope to the barest definition of what is nutritionally sufficient for subsistence - is however more and more faced with a new constraint. With the drop in the value of Algeria's main export receipts and the disillusionment with the post-independence land reform, the increased persistence of the deficit in the production of wage foods confronts policymakers with the dilemma of continually diverting away from capital accumulation scarce foreign earnings to meet necessary food imports. The contribution of oil rent to the domestic valorisation of capital proceeding from its ability to command increasing food imports and to manage a sustained policy of subsidised wage goods, seems to have reached its full potential.

As a result of the bureaucratic management of the supply of subsidised wage goods, the permanent recurrence of scarcities unavoidably results in the rocketing of supposedly

fixed prices. The increased cost of food expenditure in household budgets - a reflection of the persistence of the determination of wages by the cost of foodstuffs - is increasingly highlighting the 'limits' of the state food policy itself. The definition of the value of labour power determined by its subsistence content is *de facto* also increasingly contradicted by the weight of other food items - such as meat, vegetable and fruits - whose market price determination "exhausts" by definition the subsistence conception of labour power and as such militates ^{for} an elevation of the price of labour power. The superimposition of these two situations and their duration create not only the conditions for higher nominal wage demands (and therefore a redefinition of the distribution between wages and profits), but also the resurgence of social unrests. The bloody events of October 1988 - the continuation of several other past violent mass movements - are in themselves a clear demonstration of the extent to which such a contradiction can manifest itself.

² While the abandonment of the policy of regulation of the value of labour power cannot be socially conceived in the present context of Algeria's capitalist development (this strategy, which *de facto* operates the preservation of low wages, remains geared essentially towards the maximisation of capital valorisation), the preservation of food imports in the context of falling international oil prices compounded by the weight attached to the servicing of the debt, highlights the need to increase the domestic production of wage goods, the elevation of agricultural surplus, and the diminution of food imports themselves.

So far two possibilities can be considered as alternative policies: a redefinition of the state/junker capitalist path of agricultural development, and the elaboration of a rural project of development aimed at the peasantry. In itself a redefinition of the capitalist development of agriculture away from the bureaucratic style of state management can be undertaken on the basis of a farmer-path of development. The extent of the estate disintegration, the terms under which land is to be acquired, the freedom with which producers can operate their farms, and the social category which is to benefit from

such a reform etc., are important issues - which if they cannot be dealt ex-ante -can ultimately serve to measure the extent of the reform. The whole question depending on such an issue remains eminently political: how can the disintegration of the estates be accomplished in complete independence of the interests of the social classes and groups which are present in the state apparatus? The initiation of this new line of agricultural policy for the creation of more autonomous farms has not yet acquired the features of a systematic policy of transition away from the bureaucratically centralised state/junker management of estates. So far the timid creation of new farms has been mainly achieved in favour of two main categories: the already employed permanent workforce and some high ranking officials close to the pinnacle of power.

The elaboration of a new strategy of rural development integrating peasants however deserves also some attention. Indeed, if so far the whole state agricultural policy has been conceived as completely divorced from the peasantry (the by-passing of the peasantry resulted in a stagnant production and an acceleration of rural migration), the integration of the peasantry in a rural development project can find its justification from two main considerations: the creation of rural employment and the elevation of agricultural production. The extent to which the reformed state capitalist sector can itself serve to realise such a policy, and the conditions under which the capitalist transformations of the private sector will be systematically operated, still remain open issues regarding the success of an agricultural policy whose full formulation is only a matter of time.

APPENDIX

Appendix A: Prevalent theses on the agrarian crisis: a brief methodological note.

The approach taken throughout this work is essentially Marxist. Though no particular attempt is made towards a comparative study of existing theories, however, a brief survey of some of the current conventional ones concerning the Third World agrarian crisis is provided with mainly the aim of defining the contours of an approach which is essentially non-historical, linear, partial as well as normative in its methodology.

A Malthusian-inspired approach identifies the problem of "overpopulation" as the main cause of poverty prevailing in Third World countries. This school of thought (see P. Ehrlich, D. Meadows et al., G. Borgstrom, L. Brow etc.) clearly establishes a causal relation whereby the biological determinism of "overpopulation" transcends the entire social issue of poverty. It not only ignores the unequal aspects of food distribution within "poor" (i.e. populated) countries, this theory continues to contradict itself: by its own logic, this approach contains the implicit assumption that Third World countries, because of their demographic weight in world population, also appropriate through consumption the absolute majority of available global food production. In 1973 the USA population alone (6% of world population) consumed 35% of the world's total resources.

Taking a different approach, other proponents of liberalism, such as T. W. Schultz, Harry G. Johnson, M. Lipton etc., equate the stagnation of agricultural production with "market distortions" and "policy mistakes" produced by state intervention which leads to decreased opportunities for agrarian investment. Accordingly, if the "rules of the competitive game" are restored, this would guarantee agricultural growth and promote agricultural investment. Assessing "market distortions" and "lack of agricultural investment" exclusively from the ideologically distorted view of "policy mistakes", does not take account of the social context which gives them both their own rationality and their proper theoretical status. Ignoring the interplay of social classes and the role of the state in peripheral capitalist formations, this approach does not grasp the

specific laws of motion of capital accumulation; rather, the perception of Third World reality is perceived from within linearly transposed norms proper to developed capitalist social formations. By failing to carry out an investigation proper to peripheral countries, such an approach does not distinguish between two structurally different economies.

The absence of modern technology capable of substantially increasing agricultural production is seen by many authors (Everet Rogers, Y. Hayami & V. Ruttan^h, S. Wortman & R. Cumming etc.) as a pre-requisite for the resolution of the agrarian crisis prevailing in Third World countries. While the Green Revolution option in itself contains the potential for increasing agricultural production, the adoption and transposition of a technology produced in developed capitalist countries raises the question of its social status. A technology devised on the basis of ideal conditions in terms of available water, fertiliser use, research centres, skilled manpower etc., considerably contrasts with social formations with insufficiently irrigated land, a deficiency or absent fertiliser industry, a predominance of subsistence farming and peasant agriculture, and a lack of skilled manpower etc. According to the theory, transposition of a technology identical to that prevailing in developed capitalist countries is seen as the ultimate solution towards the eradication of the agrarian crisis. That technology is not seen as a social product born out of the class mode of organisation of material production is the main shortcoming of this form of technological determinism. Technology cannot be neutral and be seen as a mere technical solution: it is functionally determined within its own social context.

The persistence of archaic land tenure systems is also seen as a major obstacle to an elevation of agricultural production (see the resolutions adopted by the Punta Del Este Conference of 1961 and the country survey of 7 Latin American countries undertaken by the Inter-American Committee for Agricultural Development). According to the advocates of such an approach (S. Barraclough ed.) the survival of the minifundia-latifundia complex accounts for most contemporary rural backwardness. However

unavoidable a land reform may be, it does not necessarily follow that the suppression of large estates is going to guarantee higher agricultural performance. While higher performance on small plots is often obtained through increased self-exploitation and a lower level of consumption, the reproduction of the latifundia-minifundia complex can still be operated under a strictly capitalist mode of production. A reform of agrarian structures divorced from reforms in the rest of the economy, on all the evidence, is the best guarantor for the failure of a strictly agrarian policy (of all approaches mentioned this one is probably the most radical as it addresses agricultural backwardness through the institutional basis of power relations based on land use and ownership).

A conception of solidarity based on food aid, advocating a change in the food habit of the consumers in developed countries, assumes that such policy measures will operate an adequate international food redistribution beneficial to Third World countries. While a change of food habits in developed countries based on a lower level of animal protein intake is more likely to lead to a decrease in production proper, the development of food aid (other than in the case of emergency) can only lead to a further reduction of domestic food prices and the chronic deterioration of domestic food production itself. The advocates whether of one part of the argument or another of this thesis, can be found among a variety of authors who do not always belong to the same ideological stream (R. Dumont, W. Paddock & P. Paddock etc.).

Whether wishful in their thinking, or partial in their analysis, most of the above approaches suffer from the same methodological shortcoming in that they do not undertake an historical analysis capable of fully embracing reality and all its contradictions. Whatever the chosen approach (saving of course that peripheral countries are by definition irrational societies only lacking good advice) the same fundamental question remains: "in the name of which group(s) standing above society (and by extension outside history), and with no class interest involved, are such policy recommendations to be implemented ? " .

Appendix AI

Appendix AI.1: Algeria and its North African context.

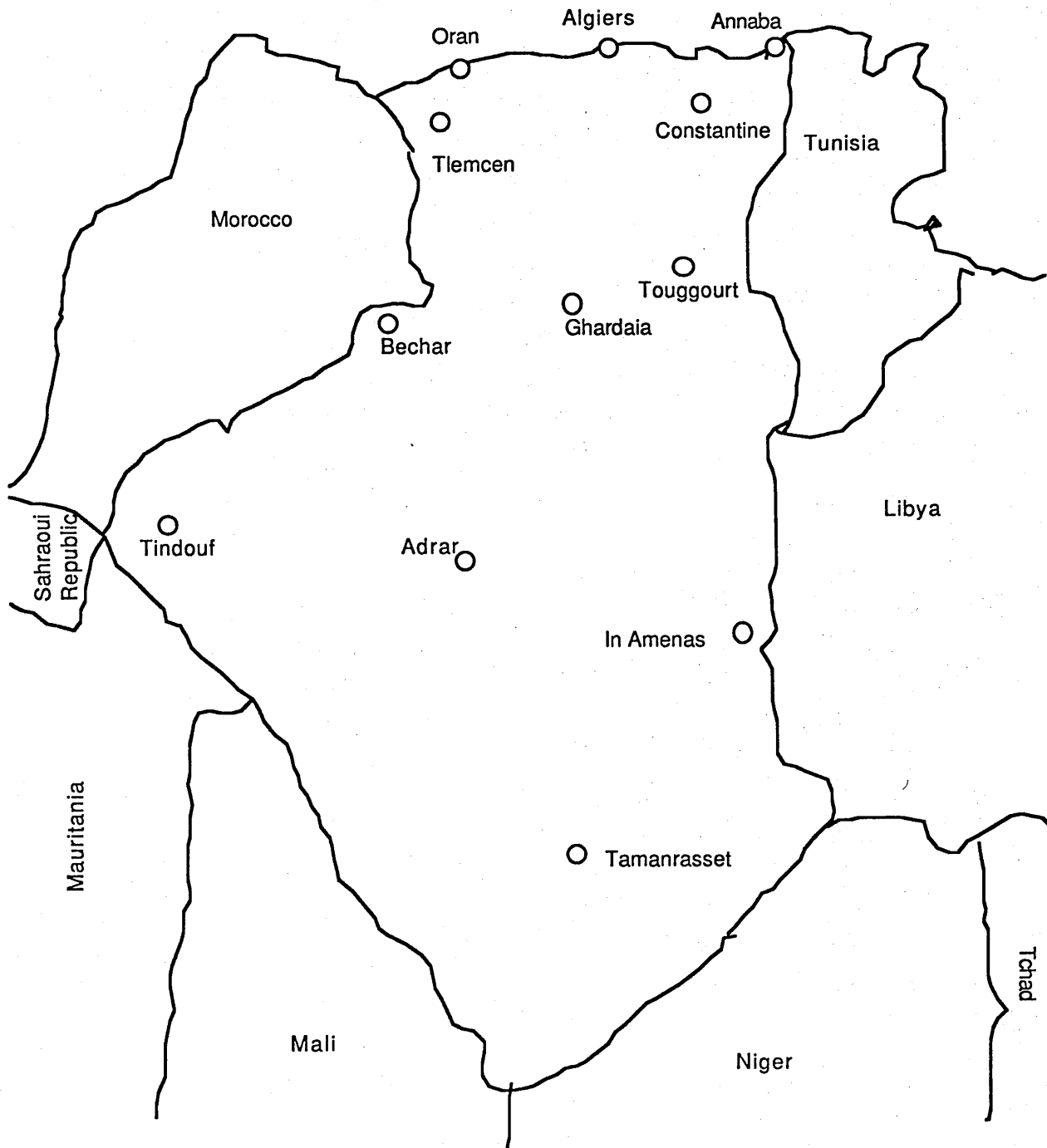


Table A1.1: Example of certain Regional and communal budgetary resources in 1901-1905.
(U: Fr million).

Tax specification	Amount	% share
Regional resources.		
Arab taxes	4.9	67%
Ordinary centimes	1.1	12%
Extraordinary centimes	0.9	15%
Tax on vineyards	0.4	5%
Total	100	% share
Communal resources.		
Centimes on Arab taxes	1.3	3%
Other centimes	1.4	4%
Fines	0.2	0.5%
Taxes on: rents	2.2	6%
sweeping	0.5	1.3%
dogs	0.2	0.5%
Corvée*	9.7	26%
Tax on market places	9.1	24%
Indirect taxes	6.7	18%
Income from communal property	4.1	11%
Administrative & notarial services	2.3	6%
Total		100

Source: Henni, A. *ibid.* p. 104.

Appendix All

Table All. 1: Structure of borrowing (Structure of debt outstanding disbursed).

	1970	1974	1977	1980	1982	1984	1985
Official creditorS	51.3%	30%	17%	15%	18.5%	21%	20%
- I.B.R.D	(3%)	(2%)	(10%)	(10%)	(11%)	(18%)	(18%)
-Bilateral	(97%)	(98%)	(90%)	(90%)	(89%)	(82%)	(82%)
Private creditors	48.6%	70%	83%	85%	81.5%	79%	80%
-Suppliers	(93%)	(44%)	(35%)	(29%)	(28%)	(26%)	(23%)
-Financial markets	(7%)	(56%)	(65%)	(71%)	(72%)	(74%)	(77%)
Share of interests in the debt service	27%	31%	44%	38%	38%	43%	35%
	38%						

Source: World Debt Tables, ibid.

Table All.2: The evolution and structure of the population from 1966 onwards are given below.

	1966		1967/69		1970/73		1974/77		1978/82	
	Population		Population		Population		Population		Population	
	Total	male	Total	Male	Total	Male	Total	Male	Total	Male
	(18-59)		(18-59)		(18-59)		(18-59)		(18-59)	
1.Total population (average).	12,142		12,955		14,400		16,282		18,699	
2.Incremental population.	--		813		1,445		1,882		2,417	
3.Theoretical labour force	4,700	1,760	5,000	,960	5,650	2,200	6,500	2,586	7,760	3,058
4.Incremental labour force	--	--	300	200	650	240	850	386	1,120	472
5.Employment creations	1,725		1,893		2,182		2,859		3,422	
6.Incremental labour force	-		168		289		677		563	
7.Net incremental requirement (4 - 6)	-		132	32	361	-49	173	-291	557	-91
8.Total employment requirement (3 - 5)	2,975	35	3,107	67	3,468	18	3,641	-273	4,198	-364

For the entire period 1966/1982 the scenario of total requirements, depending on the two main methods of computing the rate of employment of the population (the official method being both restrictive and discriminatory: the employed population referred to being mainly a male population), compare as follows.

HYPOTHESIS I:

The theoretical total active labour force is the population of the age group 18 to 59.

Total increment of the labour force: 2,920,000

Total increment of labour creations: 1,697,000

Employment requirements: 1,223,000

Rate of labour requirement: 42%.

HYPOTHESIS II: The active population is the male population aged between 18 and 59.

Total increments of the labour force: 1,298,000

Total increments of labour creation: 1,697,000

Labour surplus: 399,000

Increments of the female population effectively employed: 70,000

Labour surplus: 329,000

Depending on the population reference and, as far as the method of increments (71) is concerned, the upper limit of labour requirements is set at a level of 1.2 million unemployed, while the lower limit leaves an excess labour creation of 329,000 jobs. If however one integrates the initial levels of the labour force which served to calculate the total increments between 1966 and 1982, the above picture of labour requirements is altered in the following manner.

HYPOTHESIS I

Total employment is the level of employment in 1966 (1,725,000) plus incremental labour creation between 1966 and 1982 (1,697,000) or 3,422,000.

Total labour requirement is labour requirement in 1966 (4,700,000) plus incremental labour requirements between 1966 & 1982 (2,920,000) or 7,620,000.

Overall rate of employment: 45%

HYPOTHESIS II

Total employment = 1,725,000 + 1,697,000 = 3,422,000

Total labour requirement = 1,760,000 + 1,298,000 = 3,058,000

Excess labour creation = 364,000

Table All.3: Distribution of oil surface area between national and international oil companies.
(U: km2)

	1966	1967	1968	1969	1970	1971
Association with foreign interests(SONATRACH + foreign companies).	175,000	195,000	205,000	170,000	155,000	15,000*
Surface area under the complete control of SONATRACH	N.A	25,000	40,000	40,000	660,000	800,000

Source: K. Ammour, L.Leucate & J.J. Moulin. Op.Cit. p. 50.

*This figure represents the mixed interests between Getty Petroleum (11,500km²) and Elf-Algérie (3,500km²), an American and French company respectively.

Table All.4: Structure of oil production (U: million tons).

	1966	1967	1968	1979	1970	24/2/1971	1972
Foreign interests	30	34.4	37.1	37	33	21	12
SONATRACH	3.9	4.6	5.9	8	14.8	27	42
Total	33.9	39	43	45	47.8	48	54
Algerian control (% of total production)	11%	12%	14%	18%	31%	56%	77%

Source: Ibid. p. 51.

Appendix III

Figure III.1: The marketing network of self-managed estates.

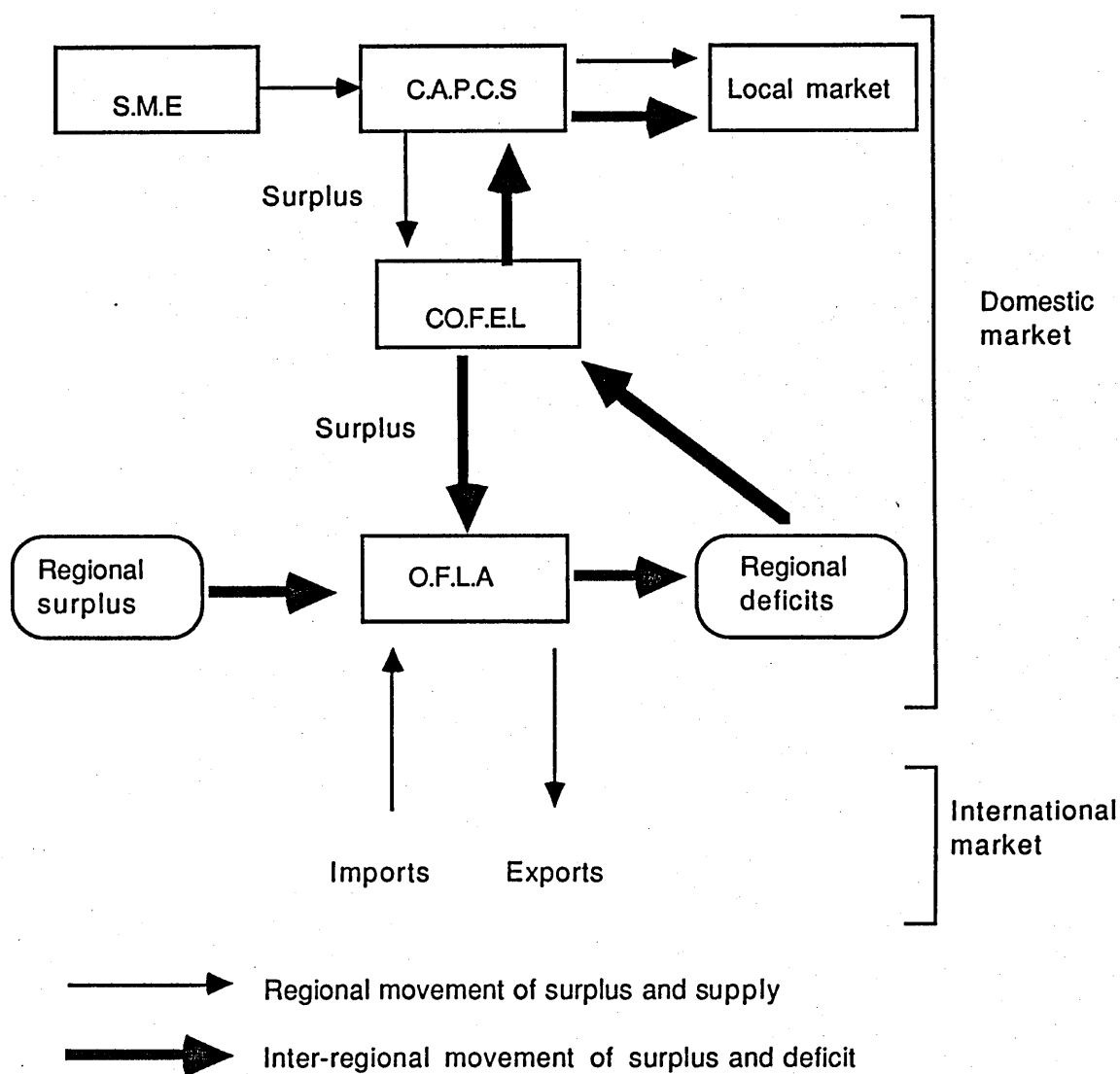


Figure III.2: Overall pattern of growth of the average number of days worked.

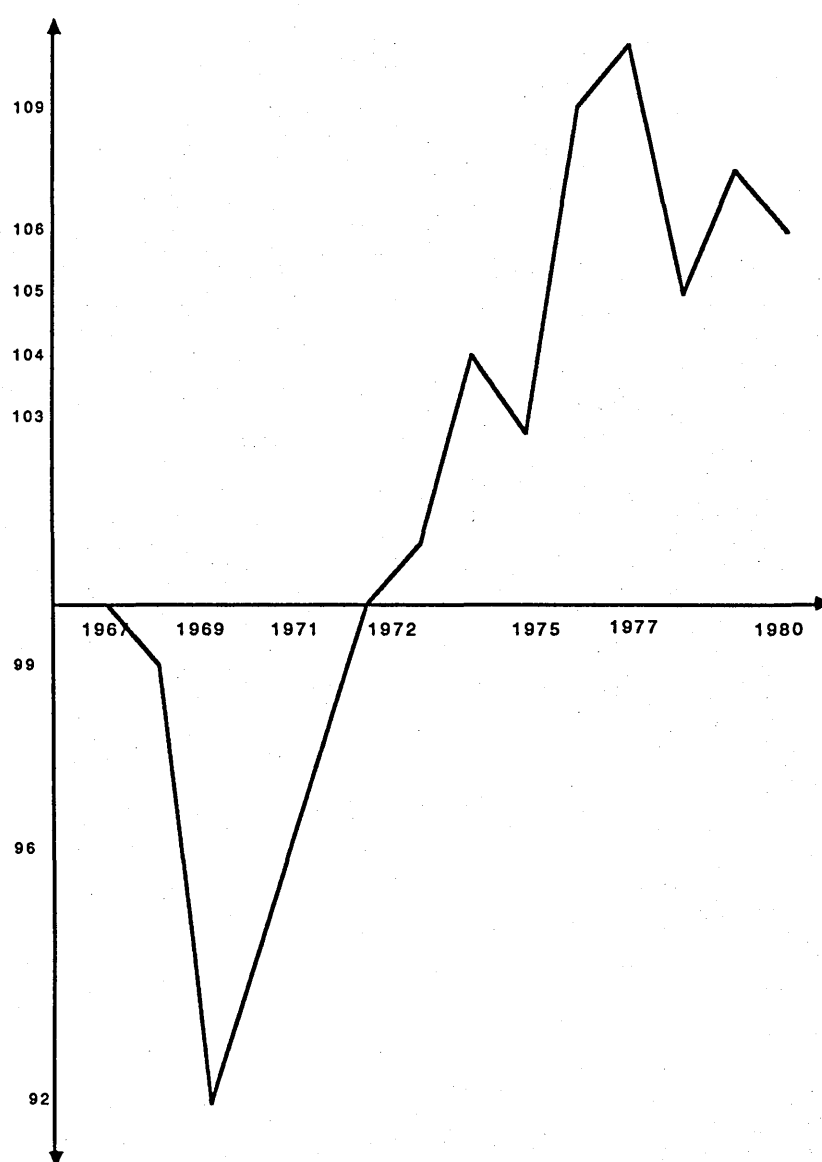


Table AIII.1: Overall distribution of GDP by main sectors.

% in agriculture		% in industry		% in services	
1960*	1979**	1960*	1979**	1960*	1979**
21	7	33	58	46	35

Source: World Development Report. (* Some figures are for 1961, not 1960; ** Some figures are for 1978, not 1979).

Table AIII.2: Structure of employment in the total agricultural sector (Number).

	In the SMS	In the PAS	In the two sectors
Permanent workers	132,950	35,392	168,342
Temporary workers	123,510	493,390	616,900.
Undetermined/ Family helpers	13,390	627,475	627,475
Total	269,850 (51)	1,156,257	1,426,107

Source: Manpower Survey. Op., Cit., and D. Benamrane. Agriculture et développement en Algérie. S.N.E.D 1980. Algiers. P. 226.

Table AIII.3: Farm machinery of the A.R.S in 1978 (Number & %).

Category of equipment held by	CS (excluding the Equipment held by the CAPCS)	CAPCS	*Proportion of the CS in the overall agricultural sector(%)
Traction equipment	6,289	5,827	28.5%
Harvesting equipment	3,849	5,604	32%
ploughing equipment	11,491	9,238	22.5%
transportation	4,144	4,400	39.4%
other equipment	2,771	2,095	21%

Source: Annuaire Statistiques de l'Algérie. 1984.

As seen in chapter III, CAPCSs are cooperatives which primarily cater for the needs of the cooperative sector but their services extend to private farmers. The question of the financial capabilities of the small holders (who remain unaffected by the benefit of land nationalisations) to hire the CAPCS services remains unsolved.

Table AIII.4: Comparative yields in the different agricultural sectors (quintal/ha).

	Cereals			Pulses			market-garden products			Citrus fruits		
	CS	SMS	PAS	CS	SMS	PAS	CS	SMS	PAS	CS	SMS	PAS
1973	3	7	4	-	4	6	-	6 1	6 9	-	112	91
1975	7	10	8	7	7	8	6 3	7 7	6 1	98	113	99
1977	4	5	3	6	6	8	4 6	5 6	6 2	90	115	110
1979	4	7	5	4	3	6	4 9	5 8	6 3	83	105	94
1980	6	9	7	4	3	6	5 9	6 2	6 6	79	101	89

Source: Ibid.

The exception is for industrial crops given the weight of industrial tomatoes. The weight of tomatoes production has also evolved as follow. 1973: 75%, 1974: 99%, 1975: 98.5%, 1976: 92%, 1977: 99%, 1977: 71%.

Table AIII.5: Balance sheet of withdrawal by the beneficiaries of the A.R measures (1979).

Wilaya	Number of beneficiaries	Withdrawals		Replaced Number	withdrawals %
		Number	%		
Tiaret	9,087	2,171	24%	536	25%
Sidi belabes	9,036	1,718	19%	NA	NA
Blida	2,021	1,271	63%	509	40%
Constantine	3,275	1,089	33%	600	55%
Skikda	2,116	927	44%	0	0%
Mostaganem	4,322	515	12%	0	0%
Batna	4,241	783	18.5%	NA	NA
Setif	4,598	625	13.6%	NA	NA
Biskra	5,310	520	10%	NA	NA
Oum El Bouaghi	6,214	487	8%	487	100%
Alger	457	301	66%	0	0%

Source: M.A.R.A quoted by Benachenhou, A. *Planification et Developpement en Algérie*. 1980. Algiers. P. 175.

TableAIII. 6: Share of the cost of seasonal workers for 5 cooperatives in the Wilaya of Algiers (1974/75) U =A.D 1,000.

Cooperatives cost	Total cost of manpower	Cost of seasonal workers	% of seasonal workers cost in total manpower
El harrach	69	50	72%
Zeralda	649	404	62%
Boudouaou	156	104	66%
Thenia	321	136	42%
Cheraga	714	430	60%

Source: Benhouria, Tahar. Op., Cit. P. 203.

Appendix IV

The randomly selected samples of households was carried out in two steps: A first draw of 520 districts (each communal population was subdivided into district and in turn each district includes about 100 households) distributed according to the weight of the geographical distribution of the population between North and South. The result was the distribution of the 480 districts in Northern Algeria (total population 10,234,974) and 40 districts in Southern Algeria (total population: 874,752). Each district was to provide 20 households or a total of 10,400 households. In turn the households were distributed by stratum depending on the proportion of its agricultural active population. 4 types of stratum were derived: The rural communes with an agricultural active population greater or equal to 75 % of total active population (STRATUM 4). The semi-rural communes with a proportion of agricultural active population included between 50 and 25% (STRATUM 3). The semi-urban communes with a proportion of active agricultural population included between 50 and 25% (STRATUM 2). The urban communes with less than 25% of an active agricultural population (STRATUM 1). The distribution of the population by stratum and district is given in the following table.

Table AIV. 1: Population distribution by stratum and by district in 1968.

Northern Algeria without Grand Algiers	Population	Districts	Drawn districts	Rate of sample survey
1/Urban communes	2,645,585	4,304	124	1/35
2/Semi-urban commune	614,539	1,090	29	1/39
3/Semi-rural commune	572,605	1,06	27	1/39
4/Rural communes	6,402,245	12,029	300	1/40
Total I	10,234,974	18,487	480	1/38
Southern Algeria				
5/Urban	339,215	740	15	1/49
6/Semi urban + semi rural	49,973	93	2	1/49
7/Rural communes	485,564	1,055	23	1/45
Total II	874,752	1,888	40	1/47
Grand total	11,109,730	20,275	520	1/39

Source: Autrey, M. "Algérie: évolution de la situation alimentaire ".UNPD/F.A.O Rome, 1878. P. 5.

A second draw of about 10,000 households. Here the number of households is determined according to a size distinction: less than 5 persons and above 5 persons.

Table AIV. 2: Household distribution in 1968.

Communes	< 5 persons	> 5 persons	Total
Urban	5,282	9,224	14,506
Semi-urban	776	1,664	2,440
Semi-rural	948	1,505	2,453
Rural	8,176	16,729	24,905
Total	15,173	29,192	44,365

Source: Ibid. p. 6.

The distribution of drawn households by types of communes gave 10,360 households distributed in the following manner.

TableAIV. 3: Survey sample in 1968.

	Number of households	Surveyed population	Represented population
North			
Urban	3,013	19,343	2,615,585
Semi-urban	555	-	
		}1,1401,541	1,187,144
Semi-rural	585	-	
South			
Urban +semi urban	376	-	
		}7,104,618	874,752
Rural + semi-rural	334	-	
Total	10,360	62,136	11,109,730 *

Source: Ibid. p. 7. *For Grand Algiers the number of households was of the order of 750 for a population of 943,555. The total population amounted therefore to about 12,053,281.

The final adjusted sample gave a total of 18,596 households (In order to arrive at a levelling of the rates of representativeness, the following rates were used. In the North 1.59 for the urban stratum, 1.78 for the semi-urban/semi-rural, 1.92 for the rural stratum. In the South 1.64 was applied to the urban stratum, 3.5 to the semi-urban/semi-rural stratum and 3.03 to the rural stratum).

Table AIV.4: Pulses, vegetables & sugar intakes for Algeria without Grand Algiers
(U= kg/person/year) in 1968.

S.E.Cs	(Pulses) Total	Fresh pulses	dry pulses	Vegetables	Sugar
All S.E.Cs (average)	6	3	3	5 8	1 4
Farmers	8	2	6	38	13
Perm.agr.workers	3	1	2	62	19
Seas. agr. workers	4	2	2	35	12
Retail traders	7	5	2	73	15
Handicraft &hand. workers	5	3	2	63	13
Middle cadres	10	8	2	110	17
Clerks	10	7	3	100	16
Qual. workers	6	3	3	84	15
Unskilled workers perm. employed	6	4	2	66	15
Unskilled workers tempor. employed	3	2	1	38	10
Self-employed in petty jobs	3	2	1	42	12
law & sec. enforcement members	14	10	4	123	16
Retired	10	6	4	64	13
Unemployed	3	1	2	38	9
Rentiers	9	5	4	87	14
Employees & whole sale traders	20	16	4	108	15
Liberal professions &	13	9	4	169	18
Services	6	4	2	74	15
top executives					

Source: Ibid.

Table AIV. 5:Fruits, meat and dairy products intakes for Algeria without Grand Algiers
(U=kg/person/year) in 1968.

SECs	Fresh Fruits	dry fruits	Total	Meat	Fish	Milk
All S.E.Cs (average)	2 6	1 9	7	1 1	0.4	2 7
Farmers	26	13	13	9	0.2	37
Perm.agr.workers	18	15	3	6	0.2	20
Seas. agr.workers	17	11	6	7	0.4	14
Retail traders	33	26	7	17	0.5	29
Handicraft & hand. workers	31	22	9	7	1.1	27
Middle cadres	54	43	11	29	3.2	43
Clerks	42	38	4	16	3.5	38
Qual. workers	34	28	6	11	2.5	26
Unskilled workers perm. employed	23	18	5	7	2.0	25
Unskilled workers tempor. employed	19	9	10	3	0.6	16
Self-employed in petty jobs	27	12	15	6	1.0	19
Law & sec. enforcement members	50	42	8	19	4.0	38
Retired	29	19	7	7	3.5	38
Unemployed	11	9	2	5	2.5	20
Rentiers	48	33	15	17	2.0	25
Employees & whole sale traders	41	30	11	31	1.0	19
Liberal professions & top executives	94	92	2	36	4.0	38
Services	26	21	5	10	1.0	22

Source: Ibid.

Table AIV. 6: Oil, fats and animal products for Algeria without Grand Algiers
(U=kg/person/year) in 1968.

S.E.C	Oil and fat		Total	Animal products (sub-total)
	Animal fat	Veg.oil		
All S.E.Cs (average)	1 0	1	9	4 0
Farmers	7	1	6	47
Perm.agr.workers	10	1	9	29
Seas. agr. workers	8	1	7	22
Retail traders	10	1	9	29
Handicraft and hand. workers	8	1	7	36
Middle cadres	14	2	12	78
Clerks	15	1	14	60
Qual.workers	11	1	10	41
Unskilled workers perm. employed	10	1	9	34
Unskilled workers tempor. employed	7	1	6	18
Self-employed in petty jobs	7	1	6	27
law and sec. enforcement members	15	3	12	64
Retired	15	6	9	36
Unemployed	6	1	5	16
Rentiers	10	1	9	56
Employees and whole sale traders	16	4	12	95
Liberal professions and top executive	18	3	15	124
Services.	9	1	8	41

Source: Ibid.

Table AIV. 7: Calorie needs of the Algerian population in 1968.

Age group	Calorie needs in relation to age* (U = Calories)	Population structure	Needs for 100 persons. (U = Calories)
Children			
< 1 year	1,030	4.40	4,791
1-3	1,360	11.03	14,994
4-6	1,930	10.71	19,606
7-9	2,190	3.32	20,414
Adolescents + Males			
10-12	2,60	3.97	10,332
13-15	2,900	3.65	10,586
16-19	3,070	4.19	12,877
20-39	3,000	10.55	31,657
40-49	2,850	3.24	9,244
50-59	2,700	2.47	6,665
60-69	2,400		
		}3.07	}6,916
70 +	2,100		
Adolescents + Females			
10-12	2,350	3.81	8,955
13-15	2,480	3.40	8,423
16-19	2,310	4.01	9,415
20-39	2,200	12.48	27,312
40-49	1,090	3.58	7,476
50-59	1,980	2.77	5,492
60-69	1,760		
		}3.34	}5,509
70 +	1,540		
Total			220,664
Total per head			2,206

Source: Ibid. p. 119. * The calorie requirement is based on the 1973 F. A.O/W.H.O calculation.

Table AIV. 8: Protein needs of the Algerian population.

Age group	Body weight		Protein needs /kg of body weight		Proteins/person /day (g)		Structure of the population		Needs for 100 persons	
<1	-		-		15.00		4.40		66.00	
1-3	12		1.06		12.72		4.03		140.30	
4-6	17		0.97		16.49		10.71		176.61	
7-9	24		0.92		22.08		9.32		205.73	
	Male	Female	M	F	M	F	M	F	M	F
10-12	33	35	0.86	0.86	28.3	30.1	3.9	3.8	112.6	114.6
13-15	43	45	0.84	0.84	36.1	37.8	3.6	3.4	131.8	128.5
16-19	60	52	0.77	0.77	46.2	40.2	4.1	4.0	193.5	163.3
20+	65	55	0.70	0.70	42.6	38.3	19.0	22.0	822.1	847.3
Total for 100 persons								3,103 g		
Total per head								31 g		

Source: Autrey, M., ibid. P. 121.

TableAIV. 12: Movement of consumer prices and import prices (AD/ kg) and its effect on the level of gross margin * (U= AD million).

		Consumer Price	Import price	Margin	Total gross margin
1969	Coffee	7.6	3	+93	
	Sugar	1.7	0.5	+123	+216
1970	Coffee	8	3	+76	
	Sugar	1.7	0.5	+258	+334
1971	Coffee	8	2	+48	
	Sugar	1.7	0.6	+282	+330
1972	Coffee	8	2	+63	
	Sugar	1.7	0.8	+239	+302
1973	Coffee	8	3	+60	
	Sugar	1.7	1	+180	+240
1974	Coffee	8	5	+87	
	Sugar	1.7	2	-88	-1
1975	Coffee	8	5	+101	-521
	Sugar	1.7	8	-622	
1976	Coffee	8	9	-39	
	Sugar	1.75	1.8	-17	-56
1977	Coffee	13	19	-27	
	Sugar	1.87	1.6	+114	-157
1978	Coffee	26	15	+765	
	Sugar	2.7	0.9	11,235	+12,000
1979	Coffee	28	131	+809	
	Sugar	2.7	1	+856	+1,668
1980	Coffee	28	15	+847	
	Sugar	2.7	2	+403	+1,250
1981	Coffee	28	11	+1,431	
	Sugar	2.7	2.9	-115	+1,316

Source: U.N Yearbook of International Trade Statistics and L'Algérie en quelques chiffres.

[Gross margin = (consumer price x imports) - (import price x imports)]

Table AIV. 13: Structure of cereal land.

	1969/70	1979/80
Total agr. sector		
Hard wheat	47% (1.5 M ha)	38% (1.30 M ha)
Soft wheat	22% (0.7 M ha)	20% (0.70 M ha)
Barley	25% (0.8 M ha)]	26% (0.90 M ha)]
	41.5%	31%
Oat	2% (0.06 M ha)]	5% (0.16 M ha)]
Artificial fodder	4% (0.10 M ha)]	10% (0.30 M ha)]
Private agr. sector		
Hard wheat	50% (1.20 M ha)	44% (0.80 M ha)
Soft wheat	16% (0.40 M ha)	11% (0.20 M ha)
Barley	29% (0.70 M ha)]	36% (0.60 M ha)]
	32.5%	44.5%
Oat	1% (0.03 M ha)]	3% (0.06 M ha)]
Artificial fodder	2% (0.04 M ha)]	5% (0.09 M ha)]

Source: Annuaire Statistique de l'Algérie.

Table AIV.14: Structure of the market-garden product sector (U = 1,000 HA and %).

	1970	1974	1980
S.M.S			
Area under cultivation	46	46	69
% share in total production	47%	37%	33%
C.S			
Area under cultivation	-	10	21
% share in total production	-	6%	9%
P.S (50)			
Area under cultivation	61	73	134
% share in total production	53%	57%	58%
Total land under cultivation	108	130	225

Source: Annuaire Statistique de l'Algérie.

Bibliography

- Abdi, N. *Réforme Agraire et voie Algérienne de développement*. Revue Du Tiers Monde. XVII, N° 67, Juillet-Septembre 1976: 663-674.
- Ageron, Ch. *L'histoire de l'Algérie contemporaine*. Paris. P.U.F 1974 .
- Almeyra, G. M. *How real was Algeria's agrarian revolution?*. CERES. FAO. March-April 1979 : 31-35
- Amara, A. Revue Algérienne des Sciences Juridiques, Economiques et Politiques. Volume XVII. N° 4, December 1980.
- Amara, A. *Effets des importations alimentaires sur la structure de la production agricole*. L'évolution de la consommation alimentaire en Afrique: le cas de l'Algérie. CREA. Alger. IIES. Genève. 1982: 117-124.
- Ammour, K. L. Leucate and J.J. Moulin. *La voie Algérienne de développement*. F. Maspéro. Paris 1974.
- Amin, S. *The maghreb in the modern world: Algeria, Tunisia, Morocco*. Chivers, Penguin edition, 1970.
- Amin, S. *Le Modèle théorique d'accumulation et de développement dans le monde contemporain*. Revue Tiers Monde. Volume XIII, N° 521. 1972: 703-726.
- Anderson, P. *Les passages de l'antiquité au féodalisme*. F. Maspéro, 1977.
- Autrey, M. *Algérie: évolution de la situation alimentaire*. UNPD/F.A.O. Rome, 1878.
- Banaji, J. *Summary of selected parts of Kautsky's The Agrarian Question*. Economy & Society. Volume 5. 1976: 2-49.
- Badillo, D. *Stratégies agro-alimentaires pour l'Algérie: prospective 2000*. Collection Maghreb contemporain.EDISUD. 1980.
- S. Barraclough ed. *Agrarian Structure in Latin America. A resume of the CIDA land Tenure Studies of: Argentina, Brazil, Colombia, Ecuador, Guatemala, Peru*. Lexington Books. D.C. Heath and Company. Lexington. Massachusetts. [Toronto. London] 1971. X
- Bardinet, C. *La répartition géographique de la population Algérienne*. La population de l'Algérie. CICRED. 1974: 63-85
- Barlan, J.P, J.P Bertrand, J.P Chabert, M. Marloie & P. Spitz. *Blé et Soja: Pénurie sur commande?* La Recherche N° 56 May 1975: 408-417.
- Bedrani, S. *L'agriculture Algérienne face au marché mondial*. Les politiques agraires en Algérie. C.R.E.A. Algiers (non dated): 11-174.
- Bedrani, S. *L'agriculture Algérienne depuis 1966*. OPU. Algiers, 1981.
- Bedrani, S. *Vers un renouveau de l'agriculture Algérienne?* Monde En Developpement. N° 36/1981: 29-43.
- Benachenhou, A. *L'exode rural en Algérie*. Algiers . 1979.
- Benachenhou, A. *Forces sociales et accumulation du capital au Maghreb*. Annuaire de l'Afrique du Nord 1973: 315-342.
- Benachenhou, A. *Formation du sous-développement en Algérie*. Algiers 1978.
- Benachenhou, A. *Planification et développement en Algérie*. 1980.
- Benakezouh, C. *La déconcentration en Algérie*. O.P.U. Algiers. 1984.

- Benamrane, D. *Agriculture et développement en Algérie*. S.N.E.D 1980. Algiers.
- Benaouda, H. *Système Productif Algérien et indépendance nationale*. OPU. Algiers. 1983 tome I.
- Benhassine, M.L. & L. Boukra. *Le processus de formation de du secteur d'Etat en Algérie*. Revue Algérienne des Sciences Juridiques, Economiques et Politiques. OPU. Algiers. 1982: 219-248.
- Benhassine, M.L. & L. Boukra. *La question alimentaire en Afrique: l'affaire des forces productives*. AFRIC-ECO N° 3 Février 1986: 18-28.
- Benhassine, M.L. & L. Boukra. *La question alimentaire en Afrique: l'affaire des forces productives*. AFRIC-ECO N° 4 Mars 1986: 19-51.
- Benhouria, T. *L'économie de l'Algérie*. F. Maspero. 1980.
- Bernard, Ch. *l'emploi a la ville et l'emploi a la campagne, une complémentarité compromise en Algérie*. Monde En développement. N°36. 1981: 63-82.
- Bernstein, H. *Notes on Capital and Peasantry*. Review of African Political Economy N°10. September-December 1977: pp 60-73.
- Bessaoud, O. *La Révolution Agraire en Algérie: Continuité et rupture dans le processus de transformations agraires*. Revue Du Tiers Monde. Volume XXI, N° 83. July-September 1980: 605-626.
- G. Borgstrom *The Food and Population Dilemma*. North Scituate. [Mass.]. Duxbury Press. 1973.
- Bouzidi, A. Revue Algérienne des Sciences Juridiques Economiques & Politiques. N° 3 September 1980.
- Bouzidi, A. *Productivité du travail dans l'agriculture Algérienne et problèmes de commercialisation des produits agricoles*. RASJEP N°4, Décembre 1977.
- L. Brow. *By Bread Alone*. New York. Praeger Publishers. 1974.
- C. B. Le monde. 22nd, April, 1987.
- T. J. Byres. *Agrarian Transition and Agrarian Question*. Review Article. Journal of Peasant Studies. Volume 4 Number 3 1977: 258-274.
- Chaulet, C. *L'éloge du couscous*. L'évolution de la consommation alimentaire en Afrique: le cas de l'Algérie. CREA. Alger. IIES. Genève. 1982: 403-409.
- Chaulet, C. *Le blé et le mouton: Pour une recherche sur les techniques agricoles Méditerranéennes*. Sociologia Ruralis. Volume 20. 1980: 181-193.
- Chaulet, C. *La Mitidja Autogérée*. Alger. SNED. 1971.
- Chaulet, C. *Paysans et collectifs de producteurs dans la R.A Algérienne*. Cahiers du CREA N° 1 Juillet-Septembre 1976.
- Chevalier, J. Marie. *Le Nouvel Enjeu Pétrolier*, Calman-Lévy, 1973.
- Clegg, Ian. *Workers' Self-Management in Algeria*. Allen Lane the Penguin Press. 1971.
- S. Corbridge. *Urban bias, rural bias, and industrialisation: an appraisal of the work of Michael Lipton and Terry Byres*. Rural Development. J. Harriss ed. Hutchinson University Library. 1986. 94-116.
- De Bernis. *Approches de quelques conditions pour l'industrialisation des pays sous*

- développés*. Undated paper of a conference held in Algiers University during the Academic year 1973/1974. Algiers . 27 pages.
- De Janvry, A. *The role of land reform in economic development: Policies and politics*. Agricultural Development in the Third World. Edited by Carl K. Eicher & John M. Staatz. 1984: 82-95.
 - De Janvry, A. *The agrarian question and reformism in Latin America*. The John Hopkins University Press. Baltimor and London. 1981.
 - Dellouci B. & A. Bouisri. *La Population Active et l'emploi*. La Population de l'Algérie. CICRED. 1974: 112-128.
 - Dellouci B. & M. Mehani. *L'émigration Algérienne*. La population de l'Algérie. CICRED. 1974: 86-99.
 - Delorme, H. *Déficite alimentaire et développement: l'Algérie*. Machrek Maghreb. : 5-21.
 - Despois, J. *La population Algérienne au 31 Octobre 1854*. Annales de géographie. Volume 65. 1956: 55-56.
 - G. Djurfeldt. *Classical Discussion of capital and Peasantry*. Rural Development. J. Harriss ed. Hutchinson University Library. 1986: 139-159.
 - Dumont, R. *Types of rural economy*. Methuen & co. ltd. 1970.
 - R. Dumont. *Forum du Developpement Nations Unies*. Sept-Oct. 1974.
 - Duprat, G. *Révolution et autogestion rurale en Algérie*. Editions Armand Collin. 1973.
 - El Kenz, H. *Marché/élevage bovine*. Débats & Critiques. AARDES. Alger, 1978: 72-97.
 - Everet Rogers. *The Diffusion of Innovations*. Free Press Glencoe (New York). 1962.
 - P. Ehrlich. *The Population Bomb*. New York. Ballantine Book. 1968.
 - E. Feder. *The Rape of the Peasantry*. Garden City. Anchor Books. 1971.
 - First, Ruth. *Libya: class and State in an oil economy*. Oil & class struggle Edited by P.Nore & T Turner. Zed press. 1980. pp. 119-142.
 - Galissot, R. *L'économie de l'Afrique du Nord*. PUF. 1969.
 - Galissot, R. *Precolonial Algeria, Economy & Society*. Volume 4. November 1975: 418-445.
 - Ghose, A. K. *Agrarian reforms in contemporary developing countries*. Croom Helm St Martin's.
 - D. Goodman & M. Redclift. *From Peasant to Proletarian*. Oxford Basil Blackwell. 1981
 - Grangaud et al. *Epidémiologie de la malnutrition de l'enfant Algérien d'age prescolaire. Rapport sur la malnutrition de l'enfant Algérien*. 5ème congrès médical Maghrebin. Alger, Mai 1975.
 - Griffin, K. and A. R. Khan. *Poverty in the Third World: Ugly facts and Fancy models*. World Development, March 1978. Volume 6 N° 3. Pergamon Press Ltd: 295-304.
 - Grignon, C. & Ch. *styles d'alimentation & goûts populaires*. Revue Française de Sociologie. V21, 1980: 531-569.
 - Guillermou, Yves. *Les exploitations Familiales éléments d'analyse régionale*. Revue

due Tiers Monde, Volume XVIII, N° 71, July-September, 1977: 603-616.

- Gutelman, Michel. *Réforme et Mystification Agraires en Amérique Latine: le cas du Mexique*. F. Maspero. Paris. 1971.

- Haddouche, H. *Situation des produits à prix fixes (1968/1981)*. Débats et Critiques. INEAP. Algiers. 1983: 67-85.

- Hadjiat, K. *Dépendance alimentaire et modèle de développement de l'élevage*. L'évolution de la consommation alimentaire en Afrique: le cas de l'Algérie. CREA. Alger. IIES. Genève. 1982: 97-116.

- Hammouda, N. E. *L'activité féminine: un indicateur des mutations socio-économiques*. Statistics. ONS. N° 3. Avril/Juin 1984: 29-35.

- Y. Hayami & V. Ruttam. *Agricultural Development: an International Perspective*. Baltimore. London. The John Hopkins Press. 1971.

- Henni, A. *La colonisation agraire et le sous-développement en Algérie*. S.N.E.D. Alger, 1982.

- Hirshman, A. *The strategy of economic development*. Yale University, 1969.

- Hugh Roberts. The Algerian Bureaucracy. Review of African Political Economy. N°24. May/August 1982: 39-54.

- Isnard, H. *Structure de la colonisation agricole en Algérie à la veille de l'insurrection*. Bulletin de Géographie d'Aix-Marseille, N°4, 1958: 85-118.

- Isnard, H. *Structure de l'Agriculture Musaulmane à la veille de l'insurrection*. Méditerranée N° 2-3 Avril-Septembre. 1960: 43-57.

- Isnard, H. *Vigne et colonisation en Algérie*. Annales de géographie Volume 58, 1949: 212-219.

- Jasra, N. *Les débuts des C.A.P.R.A : difficultés et espoirs*. Terres et Progres. N° 5, Mars 1974.

- Harry G. Johnson. *Economic Policies Towards Less Developed Countries*. Allen & Unwin. Brooking Institution. 1967.

- Joy, Leonard *Food and nutritional planning*. Journal of Agricultural Economics, Volume 24. 1973: 165-192.

- Karsenty, J. C. *Les investissements dans l'agriculture Algérienne*. Problèmes agraires au Maghreb. Edition Centre National de Recherche Scientifique. Paris. 1977: 115-142.

- Karsenty, J. C. *La Politique Agraire Algérienne*. Maghreb Machrek N°77. Juillet-Septembre 1977: 31-39.

- Kautsky, K. *La Quésition Agraire: Etude sur les tendances de l'agriculture moderne*. F. Maspero. 1979.

- C. Key. *Book Reviews*. Journal of Peasant Studies. Volume 4 Number N°2 January 1977. 241-244. Kay

- Khannes, S. *Pétrochimie et agriculture: le cas de l'Algérie*. Thèse 3ème Cycle. Grenoble. 1976.

- Knauss, Peter. *Algeria's Agricultural Revolution: Peasant Control or Control of Peasants?*. African Studies Review. ASR 20, 3 (1970): 65-78.

- Lahouari Addi. *De d'Algérie pre-coloniale a l'Algérie coloniale*. ENAL. Alger. 1985.
- Lacheraf, M. *Algérie, Nation et Société*. Paris. Maspéro. 1965.
- R. Lawless & A. Findley Ed. *North Africa*. Croam Helm. New York. 1984.
- Lazreg, M. *The emergence of classes in Algeria: A study of Colonialism and Socio-Political Changes*. Westview Press. Boulder, Colorado. 1976.
- Lesne, M. *Une expérience de déplacement de population: Les centres de regroupement en Algérie*. Annales de géographie. Volume N° 71. 1962: 567-603.
- Lenin, V. Œuvres. *Le Développement du capitalisme en Russie*. Tome 3. Editions sociales. Paris. Editions du Progres. Moscou. 1977.
- Lenin, V. Œuvres. *Le programme agraire de la Social-Démocratie dans la première révolution Russe de 1905 à 1907*. Tome 13. Editions sociales. Paris. Editions du Progres. Moscou. 1977.
- M. Lipton. *Why Poor Stay Poor: a Study of Urban Bias in World Development*. London Temple Smith. 1977.
- Madelin, Henri *Pétrole et politique en Méditerranée occidentale*. A Collin Paris. 1973.
- Mahsas, A. *l'autogestion en Algérie*. Edition Anthropos . 1975.
- Marx, K. *Capital*. Volume One. Laurence & Wishart. London. 1974.
- Marx, K. *Capital*. Volume III, Laurence & Wishart, London 1974.
- Marx, K. *Capital*. Volume Three, Laurence & Wishart, London, 1974.
- Marx, K. *Sur les sociétés précapitalistes*. CERM, Editions Sociales, 1973.
- Marx, K. *Capital*, Volume III, Charles H. Ken & Company. 1909.
- Marx, K. *Misère de la philosophie*. Editions Sociales. Paris. 1972.
- Marx, K. & F. Engels. *Manifesto of the Communist Party*. Progress Publisher. 1965.
- Massarat, M. *The energy crisis: The struggle for the redistribution of surplus profit from oil*. Oil and class struggle. Edited by P. Nore & T. Turner. Zed Press. London. 1980. pp. 26-68.
- Mazri, M. *Les hydrocarbures dans l'économie Algérienne*. SNED. 1975.
- D. Meadows et al. *The Limits to Growth*. New York. University Books. 1974.
- Mékidèche, M. *Le secteur des hydrocarbures: quelle contribution au développement économique et sociale de l'Algérie*. Revue Tiers Monde, Volume XXI, N° 83, July-September 1980: 509-530.
- Mékidèche, M. *Le secteur des hydrocarbures*. OPU. Alger. 1983.
- Molina, I. *Les industries en aval de l'agriculture*. L'évolution de la consommation alimentaire en Afrique: le cas de l'Algérie" CREA. Alger & IIES Genève. 1982: 203-236.
- Montchaussé, G. *Steppe Algérienne: causes et effets d'une desertisation*. Peuples Méditerranéens Volume 1- 1977: 123-151.
- Muttin, G. *La Mitidja: décolonisation et espace géographique*. O.P.U Alger. 1977.
- Muttin, G. *Agriculture et dépendance alimentaire en Algérie*. Machrek Maghreb N°90, October November December. 1980: 40-64.
- Norbey, O. *The economy of Algeria*. The economies of Africa. G. Allen & Unwin, 1969.
- Nore, P. *Oil and the State: A study of nationalisation in the oil industry*. Oil and

- class struggle. Edited by P. Nore & T. Turner. Zed Press. London. 1980. pp. 69-88.
- Noushi, A. *Sur le féodalisme*. Cahiers du CERM. Editions Sociales, 1974.
 - Nwoke Chibuzo .*Third World Minerals and Global Pricing*. Zed Book Ltd. London and New Jersey. 1987.
 - Ollivier, M. *La politique agraire de l'Algérie: évolution et perspective*. Doctoral Thesis. Grenoble. 1972.
 - W. Paddock & P. Paddock .*Famine-1975*l. London. Weidenfe & Nicolson. 1968.
 - Palloix, Ch. *Industrialisation et financement lors des 2 plans Quadriennaux (1970-77)*. Revue du Tiers Monde, Tome XXI, N 83, Juillet/SEptembre 1980: 531-555.
 - Passmore, R. B.M. Nocol & M. Nararayana Rao. *Handbook on human nutritional requirement*. F.A.O & W.H.O Rome 1984.
 - Phillips, A. *The concept of development*. Review of African Political Economy N° 8. January-April 1977: 7-20.
 - Prenant, A. *Essai d'évaluation et d'interprétation de la croissance urbaine en Algérie: 1966-1974*. March 1976.
 - Raffinot, M. and P. Jacquemot. *Le capitalism d'état en Algérie*. F. Maspéro, 1977.
 - Raoult, A. *Enquête sur l'état de nutrition des enfants Algériens*. Paris, Medecine & Diététique. N° 3, 1974.
 - *Rapport général du deuxieme plan quadriennal*. MPAT. Algiers.
 - Renfrew, Christie. *Why does capital need energy?* Oil & class struggle Edited by P.Nore & T. Turner. Zed press. 1980. pp. 10-25.
 - *Révolution Agraire* (the charter of Agricultural Revolution). Présidence du Conseil. November, 8th, 1871.
 - Revue du CE.N.E.A.P *Politiques Alimentaires et agricoles de l'Algérie*. N° 3 SEPT. 1985.
 - Rosier, B. *Types de development et rapports sociaux: pour une nouvelle srategie du development agricole et agro-industriel*. Monde en développement N° 29/30. 1980: 29-52.
 - Rosier, B. *Clés pour une stratégie nouvelle du development*. Les Editions Ouvrières. UNESCO. 1984.
 - Rosier, B. *Towards a critical and comparative analysis of types of development suggestions on methodology*. Division for the Study of Development. UNESCO. Paris. 1982.
 - Salama, P. & P.Tissier. *L'industrialisation dans le sous-développement*. Petite Collection Maspero. Paris, 1982.
 - T. W. Schultz .*Economic Growth and Agriculture*. New York. Maiden Head. 1968.
 - Sinha, Radha. *Landlessness: a growing problem*. F.A.O. Rome, 1984.
 - Sinha, Radha. *Food and poverty*. Croom Helm London. 1976.
 - Sutton, Keith. *Agricultural Co-operatives in Algeria*. Year Book of Agricultural Co-operation. 1981. Plunkett Foundation. Oxford. U.K: 169-190.
 - Sutton, Keith. *Agrarian Reform in Algeria- Progress in the face of Disappointment, Dilution and Diversion*. Rural Poverty and Agrarian Reform. Edited by S. Jones, P.L.

- Joshi, M. Murmis. Allied Publishers Private Ltd: 356-375.
- Tayeb Said Ahmed. *Le développement industriel de l'Algérie*. Edition Anthropos, 1981.
 - Tiano, A. *Le maghreb entre les mythes*. P.U.F 1967 .
 - Tlemcani, Rachid. *State and Revolution in Algeria*. Westpoint Press. Zed Press. London. 1986.
 - Tou, A. *La sécurité alimentaire en Algérie: Contribution de la SN-SEMPAC*. L'évolution de la consommation alimentaire en Afrique: le cas de l'Algérie. CREA. Alger. IIES. Genève. 1982: 193-202.
 - Trebous, M. *Migration and development: the case of Algeria*. O.E.C.D. Paris. 1970
 - Vatin, J. C. *L'Algérie politique, histoire et société*. Paris. A. Collin. 1974.
 - Von Freyhold, Michaela *The post-colonial state and its Tanzanian version*. Review of African Political Economy . No 8. January-April 1977: 75-89.
 - Howard Wagstaff, Grace Gachacha, Henry Mbogoh .*The Livestock Situation in Developing Countries*. Science, Technology & Development Volume 4 N°3 & 4, August 1986-January 1987: 6-10.
 - Winson, Anthony. *The "Prussian road" of agrarian development: a reconsideration*. Economy and Society Volume 11 N° 4 November 1982. 381-408.
 - S. Wortman & R. Cumming .*To Feed this World*. Baltimore. The John Hopkins Press. 1978.
 - Yacono, X. *La colonisation des plaines du Chélif*. 2 Volumes. Algiers. 1955.

Statistical Sources.

- *Algérie: Evaluation de la Situation Alimentaire (Analyse Nutritionnelle de l'Enquête Nationale sur la Consommation et les Budgets des Ménages)*. FAO. Rome, 1978.
- *L'Algérie en quelques chiffres*. Direction des statistiques. Alger. 1970-1984.
- *Annuaire Statistique de l'Algérie*. MPAT. Direction des Statistiques et de la Comptabilité Nationale.
- *B.P Review of World Gas*. August 1985.
- *Dépenses de Consommation des Ménages Algériens. Premiers Résultats & Analyse Globale*. Direction des Statistiques et de la Comptabilité Nationale. Commissariat National aux recensements et enquêtes Statistiques. Alger. Décembre 1981. (1980 Survey).
- *The Economist*. 26 November-2 December 1988.
- *Food Balance Sheets*. 1975-77 Average and Per caput Food Supplies 1967 to 1977. F.A.O Rome. 1980.
- *L' Enquête de main d'œuvre dans le secteur Privé*. MARA. Algiers. 1968.
- *Rapport General du Plan de Constantine*.
- *Recensement Générale de l'Algérie*. 1972.
- *Statistiques Agricoles*. N° 5, Juin 1968.
- *Series Statistiques 1967-82*. MPAT. Direction Générale des Statistiques. October. 1984.

- *Statistiques*. Office des Statistiques. Algiers, 1984
- *Tableaux de l'économie Algérienne*, statistique générale de l'Algérie, 1960.
- *U.N World Development Report 1981*. The World Bank.
- *U.N World Debt Tables. External Debt of developing countries*. 1982/83 Edition. The World Bank.
- *U.N Yearbook of International Trade Statistics*.
- *United Nations World Tables, 1976*. The World Bank.
- *United Nations World Tables, 1982/83*. The World Bank.
- *United Nations World Tables, 1986/81*. The World Bank.

